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DEPARTMENT OF THE ARMY FIELD MANUAL

QUARTERMASTER CLOTHING AND GENERAL SUPPLIES DEPOT COMPANY (T/0&E 10-227)

DEPARTMENT OF THE ARMVS ANDLY 1950

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QUARTERMASTER CLOTHING AND GENERAL SUPPLIES DEPOT COMPANY (T/O&E 10-227)



DEPARTMENT OF THE ARMY

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

- 1. PURPOSE. The purpose of this manual is to provide information necessary for the efficient functioning of the quartermaster clothing and general supplies depot company (T/O&E 10-227).
- 2. SCOPE. The scope of this manual covers the organization and operation of the company, together with the duties of the personnel assigned to the company.

Section II. THE UNIT

- 3. MISSION. The mission of the quartermaster clothing and general supplies depot company is to provide administrative and technical personnel for the operation of a quartermaster clothing and general supplies depot (fig. 1).
- 4. ASSIGNMENT AND CONTROL. a. The quartermaster clothing and general supplies depot company is a non-divisional unit and is assigned to a theater of operations. After this initial assignment the company operates either in the

MISSION OF THE COMPANY

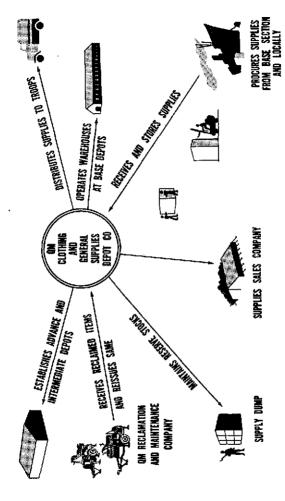


Figure 1. Mission of the company

army zone or in the communications zone to provide quartermaster service in support of troops.

- b. Control of the company is as follows:
 - (1) Communications zone. In the communications zone the company normally is assigned to a quartermaster base depot and operates under headquarters and headquarters company, quartermaster base depot (T/O&E 10-520-1).
 - (2) Combat zone. In the combat zone the company usually is assigned on the basis of one per field army and is attached to headquarters and headquarters detachment, quartermaster battalion (T/O&E 10-536).
- 5. **RELATED UNITS.** The quartermaster clothing and general supplies depot company has a direct relation to the following quartermaster units:
- a. Quartermoster service company. The quartermaster service company (T/O&E 10-67) may be called upon to supply labor personnel for the receipt, storage, and distribution of bulk clothing and general supplies. Such personnel will work under depot company supervision.
- b. Quartermoster salvage company. The quartermaster salvage company (T/O&E 10-187) is responsible for sorting and classifying salvage, with respect to the supply service originally issuing each item of material, and for forwarding it to the proper depot or repair installation (fig. 2).
- c. Quartermaster laundry company, semimobile. The quartermaster laundry company, semimobile (T/O&E 10-167), launders clothing that has been

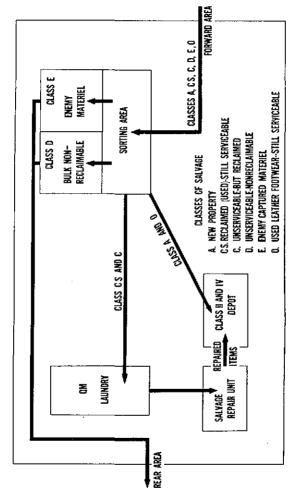


Figure 2. Salvage activity in army depot area.

forwarded for repair by the quartermaster salvage company.

- d. Quartermaster reclamation and maintenance company, semimobile. The quartermaster reclamation and maintenance company, semimobile (T/O&E 10-237), provides field maintenance for shoes, clothing, textiles, and other quartermaster equipment.
- e. Supplementary units. As the situation warrants, supplementary units may be provided from quartermaster service organization (T/O&E 10-500).
- 6. CAPABILITIES. When labor personnel is furnished in proportion to the specific mission of the company, the quartermaster clothing and general supplies depot company is capable of—
- **a**. Receiving, storing, and supervising the distribution of bulk clothing and general supplies to supply points.
- b. Maintaining a reserve stock of quartermaster clothing and general supplies equivalent to an established operating level for 400,000 individuals.
- c. Dividing into three operating platoons, each of which is capable of separate operation and may be used in establishing advance and intermediate depots, in which case, the depot headquarters platoons may act as a base operating platoon and a reservoir for supplies.

CHAPTER 2

Section I. TRAINING OF INDIVIDUALS

- 7. GENERAL. The purpose of individual training is the acquisition and development of the skill necessary to enable an individual to play his part effectively in the military team, in order to assure success in battle. Each individual should be thoroughly familiar with the duties of his immediate supervisor, in addition to those of his own job.
- 8. SCHOOL TRAINING. Dependent upon circumstances, personnel should attend all available schools which will aid them in attaining maximum proficiency. Such training will supplement field training.
- 9. UNIT SCHOOLS. a. Troop schools. Troop schools are used for the military education of the individual officer and non-commissioned officer, for the training of specialists, and for the training of instructors to coordinate and insure uniformity of instruction. Refresher training, instruction in new tactical doctrine, and use and care of new equipment will be conducted in troop schools. Training progress charts, which show the program hours allotted to each specialty, will be maintained (fig. 3).

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- b. Training programs. The following training programs are used in training enlisted personnel:
 - (1) ATP 21-1. Army Training Program (ATP) 21-1, Basic Military Training Program (14 weeks) for Newly Enlisted Men (6 April 1949) provides the basic military training for newly enlisted personnel. It also provides refresher training for personnel who have been in the Army for some time.
 - (2) MTP 10-1. Mobilization Training Program (MTP) 10-1, Mobilization Training Program for Quartermaster Enlisted Personnel of the Army Service Forces (20 September 1945) provides training for enlisted personnel in the military occupational specialties prescribed by the table of organization.

Section II. UNIT TRAINING

10. TRAINING SCHEDULES. Training schedules, giving detailed instructions for the conduct of training over a short period of time, are issued by the company commander. When the company is attached to a battalion, the battalion S-3 will prepare training schedules for such training as is to be conducted under his personal direction. Policies and procedures prescribed in MTP 10-2, Mobilization Training Program for Quartermaster Units of the Army Service Forces (10 May 1945); MTP 10-3T, Mobilization Training Program for Advanced Unit Training of Quartermaster Units of the Army Service Forces (19 March 1946); FM

- 21-5, and TM 21-250 are followed. Planning for the field operation phase of training is dependent largely upon local facilities. Whenever possible, the company will operate under conditions similar to those expected in the field. MTP 10-2 provides a guide for unit training. MTP 10-3T is designed for advanced unit training and should be used only when ordered by proper authority.
- a. Subject material. Such subject material as camouflage and cover, loading and movement of vehicles, fire precautions, and demolition of supplies and equipment should be stressed continually. Other subject material should include use of weapons, map reading, sanitation, first aid, and defense against air, chemical, ground, and mechanized attack.
- **b.** Teaching methods. Generally, instruction is most effective when conducted in small groups. Effective teaching methods often will include the following:
 - (1) Visual aids. Visual aids that can be utilized by the instructor include training films, film strips, graphic training aids, and models and devices.
 - (2) Field demonstrations. Field demonstrations are the most valuable methods of attaining efficiency in a student group. Problems should be so arranged that the company or its components will be required to operate with reduced strength under conditions simulating those which may arise in the theater of operations.

- (3) Reference and instructional material. To obtain the latest references and training aids, the most recent editions of FM 21-8, SR 110-1-1, and the SR 310-20 series should be consulted. All field and technical manuals and other Department of the Army publications, pertinent to the training and operation of the quartermaster clothing and general supplies depot company, should be gathered in a company library and made available to interested personnel at all times.
- c. Points for emphasis. The following points deserve emphasis during the training period:
 - (1) Nomenclature of supplies. The many items handled by the quartermaster clothing and general supplies depot company make it necessary for personnel to understand the importance of proper nomenclature.
 - (2) Improvisation. Constant emphasis must be placed on the probable necessity for improvisation of temporary storage facilities in a theater of operations. Personnel must be taught to improvise readily and not to rely too much on procedures and equipment available under ideal conditions.
 - (3) Tropical and arctic climates. Personnel must understand the special problems of depot operation in tropical and arctic climates.

- (a) Tropical operations. Depot company personnel operating in tropical areas usually will have to rely on skillful use of canvas to protect supplies. Adequate dunnage and proper circulation of air in supply areas are constant storage factors to be considered.
- (b) Arctic operations. In the arctic areas normal difficulties connected with the receipt, storage, and issue of items of equipment such as clothing, tools, spare parts, tentage, shelters, machinery, and special trailers increase in number and importance. Frequent replacement of equipment is required.
- (4) Civilian and prisoner of war labor. All members of the depot company should receive instruction in military-civilian relationship and in the guarding and administration of prisoners of war.
- (5) Site selection and development. Since good camp engineering is an important factor in contributing to the health and efficiency of a service unit in the field, instruction in site selection, tent pitching, field installations, and field house-keeping should be included in the training program.
- (6) Sanitation and hygiene. In tropical, semi-tropical, and frigid climates the health and comfort of troops depend upon how well they have been trained in

sanitation and hygiene. Clean clothing is particularly important in the arctic because dirt destroys its insulating qualities. Sanitation must be rigidly enforced to prevent pollution of snow and ice that may be needed for drinking and cooking water (FM 70-15).

- d. Supply economy. In all training phases, emphasis must be placed on supply economy. The highest standards must be set up and enforced for the conservation, use, and storage of all individual and organizational supplies and equipment.
- 11. CADRE. The cadre is a key group of enlisted personnel used to establish and train a new unit. Since cadre training is an essential part of preparation for combat, cadre understudies must be trained concurrently for all key positions. The company is expected to furnish a cadre of 18 enlisted personnel (T/O&E 10-227).

CHAPTER 3

ORGANIZATION AND EQUIPMENT

Section 1. ORGANIZATION

- 12. SECTION. The company has sections of two types—a clothing section and a general supplies section. Each clothing section has 8 men and each general supplies section has 10 men.
- 13. PLATOON. a. Operating platoons. Each operating platoon is composed of a platoon head-quarters of 1 officer and 6 enlisted men, one clothing section, and three general supplies sections.
- b. Depot headquarters platoon. The depot headquarters platoon is composed of a platoon headquarters of 1 officer and 5 enlisted men, one clothing section of 8 men, and one general supplies section of 16 men.
- 14. COMPANY. The company is composed of the office of the depot commander (1 officer, 1 warrant officer, and 2 enlisted men); the company headquarters (1 officer and 23 enlisted men); the depot headquarters platoon (1 officer and 29 enlisted men); and the three operating platoons (1 officer and 44 enlisted men each) (figs. 4 and 8).

물 3 3 OPRE PLAT ORGANIZATIONAL CHART OF THE COMPANY き GEN SUP DEP CO DM CLO AND SUP SEC ij DEP HQ PLAT CLO SEC OFFICE OF THE DEPOT COMMANDER

Figure 4. Organizational chart of the company.

Section II. EQUIPMENT

15. SPECIALIZED ORGANIZATIONAL EQUIPMENT. Most of the specialized organizational equipment provided the company consists of materials-handling equipment.

a. Fork lift truck.

- Description. The fork lift truck is a gasoline-powered, pneumatic-tired fourwheeled automotive unit which enables one man to pick up a unit load, carry it to its destination, and stack it as high as the capacity of the particular model permits. The load is carried in front of the truck on a two-tined fork. which is moved vertically on a supporting frame by either a mechanical or a hydraulic lift mechanism. The supporting frame and the fork can be tilted forward 3° from the vertical to pick up the load and backward about 12° from the vertical to aid in balancing the lifted load (fig. 5).
- (2) Capacity. The fork lift truck has a lifting height of 144 inches and a carrying capacity of 3,500 pounds.
- (3) Use. The most efficient use of the truck is in handling palletized unit loads of 2,000 pounds or more. However, it is often used to move items which, because of their size or shape, cannot be palletized. For best results the fork lift truck should be used in conjunction with

a tractor-trailer train whenever the distance the load is to be carried is 250 feet or more (TM 10-1640).

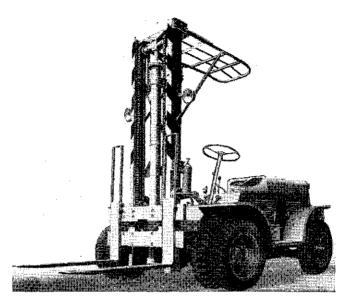


Figure 5. Fork lift truck.

b. Warehouse tractor.

(1) Description. The warehouse tractor is a four-wheeled, gasoline-powered, pneumatic-tired vehicle equipped with a drawbar to engage the trailer. It may be mounted on either three or four wheels, depending on the model. A single steering wheel usually allows shorter turns but tends to reduce stability (fig. 6).



Figure 6. Warehouse tractor.

- (2) Capacity. The warehouse tractor has a capacity of 4,000 pounds.
- (3)Use. The warehouse tractor may be used for direct drag-towing of materials along the floor on skids, for pulling one or two trailers, or for towing a long train of trailers. Where the volume of materials and the regularity of schedules warrant its use, the trailer team is the most practical and economical method of moving materials with a warehouse tractor. In this system the tractor acts as a locomotive for a trackless train of trailers. The train moves through the storage area, spotting trailers at intervals where they are to be used and picking up trailers that are to be moved. Whenever the distance the load is to be

carried exceeds 250 feet, a tractor-trailer train should be used.

c. Warehouse trailer.

- (1) Description. The warehouse trailer is a four-wheeled truck designed to achieve large carrying capacity and simple swift coupling with the towing unit. The platform, made of wood and steel, usually is 3 feet wide and 6 feet long and is carried about 14 inches above the floor. Stake pockets are located on all four sides of the platform, so that racks can be shifted easily to support the cargo. When the trailer is being loaded by hand, each side of the platform will be lined with a beveled strip of wood that keeps packages in the center of the trailer. However, when the loading is mechanical, the beveled strips will be removed so that the pallets will rest firmly on the platform. Coupling is accomplished by either an automatic coupler, a self-locking pintle, or a pintle-and-loop coupler, depending on the particular model.
 - (2) Capacity. The warehouse trailer has a capacity of 4,000 pounds.
 - (3) Use. The warehouse trailer is used most efficiently with tractor-trailer trains. It also may be used as a hand-propelled vehicle. It operates best on hard-surfaced roads or on solid floorings. It is not designed to operate on

soft or uneven surfaces. Its efficiency depends, to a large extent, upon its balanced use with other equipment.

d. Hand truck.

- (1) Description. The hand truck is a frame supported at one end by two rubber-tired wheels and at the other end by two handles held by the operator. A steel nose iron is attached to the lower end of the frame to aid in picking up and supporting the load. A clamp is mounted at the top of the frame to secure the barrel while the truck is in motion. For use in narrow aisles the wheels may be arranged in the "western" pattern so that they are inside the width of the frame. In the "eastern" pattern, the framework is tapered at the lower end and the wheels are placed on the outside. The truck can be equipped with safety brakes, which operate against the outside surfaces of the wheels.
- (2) Capacity. The hand truck has a capacity of approximately 600 pounds.
- (3) Use. The chief use of the hand truck is to transport small quantities of materials over distances not exceeding 150 feet in one direction. It is of special advantage in handling odd-shaped packages and in moving materials in narrow aisles and other confined storage areas. It is used to best advantage to move packages which, because of their shape

or small number, do not warrant the use of the mechanical equipment.

e. Gravity roller conveyor.

- (1) Description. The gravity roller convevor is a continuous platform of evenly spaced rollers which turn freely in the frame of the platform. It is a simple device on which packages may be transported. Rollers usually are placed above the frame so that packages wider than the width of the conveyor can be carried. Roller diameters range from one-half inch to 3 inches, with the size of the rollers in a conveyor varying with the weight of the load to be carried. The roller conveyor can be adapted to many situations by including several kinds of sections in it. Straight sections (10 feet long by 12 or 18 inches wide) can be hinged to clear the way for cross traffic. Curved sections (10 feet long by 12 or 18 inches wide) can be hinged to clear the way for cross traffic. Spur and converging sections may be used where one conveyor is to branch into several others, or where a number of conveyors converge. Supports with 9-inch and 15-inch arms are provided by the table of organization and equipment (fig. 7).
- (2) Capacity. Capacity will depend upon the type of conveyor system installed. The physical layout of the installation, the character and volume of the mate-

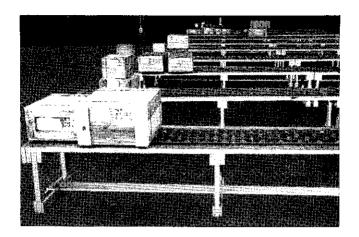


Figure 7. Gravity roller conveyors.

rials to be handled, and the number of points in the installation that the conveyor is to serve will influence capacity.

(3) Use. The gravity roller conveyor generally is used in a warehouse or depot or wherever a heavy flow of packages is to be moved over a definite line of travel. These conditions usually are found only in the larger installations. Single sections may be used anywhere to load and unload trucks and freight cars.

f. Electric lighting equipment.

(1) Power for electric lighting is furnished by four No. 4 sets of electric lighting equipment. Each set of equipment consists of a 5-kilowatt, 120-volt, 60-cycle, 1horsepower, alternating-current, gaso-

- line-powered generator, together with tools and accessories (Eng. 6-460-04).
- (2) Capacity. The capacity of the electric lighting equipment is 20,000 watts.
- (3) Use. The electric lighting equipment serves the depot area.

g. Baling machine.

- (1) Description. The baling machine measures 29 by 14 by 36 inches and is hand-operated. The material to be baled usually is weighed before insertion into the baler. The pressure board at the top of the baler is lowered by a handle over the balable material, and through pressure the material then is compressed into compact bales. The bales are bound by baling wire inserted through openings in the outer framework of the baler.
- (2) Capacity. The capacity of the baler is 125 pounds. The number of bales that can be turned out in a specified time will depend upon the number of men employed. Best results can be achieved by employing two men to operate the baler, with several other men weighing and moving the balable material to and from the baler.
- (3) Use. The baler is used to bale clothing and other items for shipment and storage.
- 16. PROVISION OF EQUIPMENT. The specialized organizational equipment (par. 15) which is

authorized the quartermaster clothing and general supplies depot company is distributed as follows:

a. Section.

- (1) Fork lift truck. The clothing section of the depot headquarters platoon and the clothing section of each of the three operating platoons are authorized 1 fork lift truck each. The general supplies section of the depot headquarters platoon is authorized 3 fork lift trucks, and the three general supplies sections of each of the three operating platoons are authorized 1 truck each. This totals the 16 fork lift trucks authorized.
- (2) Warehouse tractor. The clothing section of the depot headquarters platoon and the clothing section of each of the three operating platoons are authorized 1 tractor each. The general supplies section of the depot headquarters platoon and the three general supplies sections of each of the three operating platoons are authorized 1 tractor each. This totals the 14 warehouse tractors authorized.
- (3) Warehouse trailer. The clothing section of the depot headquarters platoon and the clothing section of each of the three operating platoons are authorized 5 trailers each. The general supplies section of the depot headquarters platoon and the three general supplies sections of each of the three operating platoons are authorized 5 trailers each. This totals the 70 trailers authorized.

- (4) Hand truck. The clothing section of the depot headquarters platoon and the clothing section of each of the three operating platoons are authorized 2 hand trucks each. The general supplies section of the depot headquarters platoon and the three general supplies sections of each of the three operating platoons are authorized 2 hand trucks each. This totals the 28 hand trucks authorized.
- (5) Baling machine. The clothing section of the depot headquarters platoon and the clothing section of each of the three operating platoons are authorized 1 baling machine each. This totals the 4 machines authorized.
- b. Platoon. The platoon headquarters of the depot headquarters platoon and the platoon headquarters of each of the three operating platoons are authorized 1 set of electric lighting equipment each. This totals the 4 sets authorized.
- c. Company. The company is authorized a total of 200 10-foot straight-length sections of roller gravity conveyor, of which 100 sections are 12 inches wide and 100 sections are 18 inches wide. The company is authorized twenty-four 10-foot, 45° angle sections of conveyor, of which 12 sections are 12 inches wide and 12 sections are 18 inches wide. The brakedown is given below.

	Conveyor, gravity roller (10-ft, sections)				
Unit		t length lth)	45° angle (width)		
	12 inches	18 inches	12 inches	18 inches	
Platoon hq section of depot hq platoon	25	25	3	3	
Platoon hq section of the 3 operating platoons	25	25	3	3	
Total company	100	100	12	12	

Section III. MAINTENANCE OF EQUIPMENT

- 17. MAINTENANCE DUTIES. Every member of the quartermaster clothing and general supplies depot company has a definite maintenance responsibility. It is the duty of all officers and noncommissioned officers to see to it that instructions and procedures for maintenance operations, which are published in TM 38-650 and in Department of the Army lubrication orders, are strictly complied with by all personnel under their immediate supervision.
- 18. PREVENTIVE MAINTENANCE. a. Purpose. The purpose of preventive maintenance is to detect and correct minor defects before they develop into major defects. The following procedures are necessary for preventive maintenance:

- (1) First echelon organizational maintenance, consisting of daily and weekly maintenance services performed by all operators through observance of rules contained in TM 38-650, TM 37-2810, appropriate operators' manuals, and lubrication orders.
- (2) Second echelon organizational maintenance, consisting of weekly, monthly, quarterly, and semiannual maintenance services performed by organization mechanics.
- b. Responsibility. The commander is responsible for seeing that instructions and procedures for preventive maintenance operations are strictly complied with by all personnel under his control. He also is responsible for seeing that each individual user, wearer, or operator of equipment within his command is trained in the preventive maintenance of such equipment.
- 19. MAINTENANCE OF MATERIALS-HANDLING EQUIPMENT. a. General. The operator is the most important single factor in preventive maintenance. Each operator is required to perform certain maintenance services on his equipment. The proper performance of these services will do much to prolong the life of the equipment, obviate major repairs by higher echelons of maintenance, and assure the operator that his equipment will perform its mission consistently and dependably.

- b. Operator's maintenance. Before-operation service consists in checking the level of fuel, oil, and water; checking tires for correct inflation and possible damage; and conducting a visual inspection to determine whether accessories are in proper place and in good operating condition. While the machinery is in operation, the operator should be alert for any sounds, such as rattles, knocks, squeaks, or hums, that may be a sign of trouble. After-operation and weekly services consist in cleaning the motor and the exterior of the vehicle and checking springs and axle housings to see that they are secure and in good condition (TM's 37-2810 and 38-650).
- c. Organizational maintenance. Organizational maintenance is that maintenance authorized for, performed by, and made the responsibility of, a using organization on its own equipment. This maintenance normally consists of inspecting, cleaning, servicing, preserving, lubricating, and adjusting, as required, and also may consist of replacement of minor parts not requiring highly technical skill. Organizational maintenance embraces first and second echelon maintenance, as described in paragraph 18a.
- d. Higher echelon maintenance. The nature and extent of higher echelon maintenance will be governed by the tactical situation, nature of repairs needed, capabilities of personnel, and availability of spare parts, tools, and equipment. However, under emergency conditions such maintenance is performed by the personnel of any maintenance organization, using whatever equipment is available.

- (1) Field maintenance. Field maintenance is that maintenance authorized for, and performed by, designated maintenance personnel in direct support of a using organization. It usually embraces third and fourth echelon maintenance, which is performed by either mobile or semimobile maintenance organizations, or in fixed shops in close support of using troops. Third echelon organizations repair and replace specified subassemblies and assemblies, and repair the overflow from the lower echelons. The main function of fourth echelon maintenance is the rebuilding of major items, using serviceable assemblies and subassemblies in stock or those from disassembly of unserviceable items, as authorized.
- (2) Depot maintenance. Depot maintenance is that maintenance required for the repair of equipment which requires a major overhaul or complete rebuild of parts, subassemblies, and assemblies. Such maintenance is intended to augment stocks of serviceable equipment, or to support lower levels of maintenance by the use of more highly skilled personnel than are available in organizational or field maintenance activities. Depot maintenance embraces fifth echelon, which is the highest echelon of maintenance (AR 750-5).

- 20. MAINTENANCE OF INDIVIDUAL AND OR-GANIZATION EQUIPMENT. a. Vehicles. The vehicles assigned to the quartermaster clothing and general supplies depot company will be maintained by the drivers and the company automotive mechanics, who will follow procedures prescribed in TM 37-2810 and the proper vehicle technical manuals.
- b. Equipment. Equipment will be maintained by the user and the company mechanics as prescribed by TM 38-650. Policies prescribed by higher authority will be followed.
- 21. MAINTENANCE RECORDS. a. Vehicles. For motor vehicle maintenance, records will be prepared on DA AGO Form 460.
- b. Materials-handling equipment. For materials handling equipment, maintenance records used include: DA AGO Form 465 (Technical Inspection and Work Sheet); DA AGO Form 478 (Modification Work Order and Major Assembly Replacement Records); DA AGO Form 811 (Work Order); DA AGO Form 9-75 (Daily Dispatch Form); and DD Form 110 (Vehicle and Equipment Operational Record).
- 22. SUPPLY OF SPARE PARTS AND TOOLS. a. Allowance. Authorized initial allowances of spare parts and tools for the quartermaster clothing and general supplies depot company will be supplied upon activation of the company. Company supply personnel will maintain the authorized stock level by requisition from, or exchange with, the designated supplying organization.

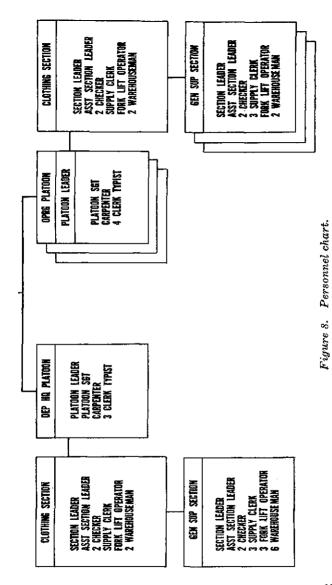
b. Requisitions. The effectiveness of spare parts supply is dependent largely upon careful study of needs by maintenance personnel, and upon clear and accurate requisitions to the supply agency. When appropriate, all spare parts requisitions should contain the make, model, and serial or series number of the equipment. The requisition also should contain the official stock number and nomenclature of all items required. The latest Department of the Army supply catalog or standard nomenclature list should be used to obtain spare parts numbers and nomenclature. On the face of each requisition a reference should be made to the source of information. When technical manuals are used to obtain spare parts numbers and nomenclature, the title and date of such publications should be stated on the face of the requisition to help the supply agency in determining the exact spare parts desired.

CHAPTER 4 DUTIES OF PERSONNEL

Section I. GENERAL DESCRIPTION

- 23. OFFICE OF DEPOT COMMANDER. The office of the depot commander carries on the administration of the depot and all assigned and attached personnel (fig. 8).
- Depot commander. The commissioned officer (captain, authorized by T/O&E 10-227) who is the depot commander assumes responsibility for the establishment of procedures which will insure successful and efficient operation of the depot. He is responsible for the receipt, inspection, storage, and issue of all supplies and equipment handled by the depot and for their protection against theft. fire, and enemy action. Since he is the accountable officer, he is responsible for correct maintenance of all administrative records necessary for depot operation. He must have a thorough knowledge of army supply problems and procedures. especially those pertaining to the Quartermaster Corps. Although his functions and responsibilities may vary with the organization of the army supply system, he may be responsible, when operating under an army quartermaster, for the following duties:
 - (1) Preparing requested data for the class II and IV phases of the quartermaster supply unit.

PERSONNEL CHART



- (2) Preparing class II and IV estimates required by higher authority.
- (3) Maintaining accurate figures on class II and IV levels in the depot.
- (4) Providing, when requested, class II and IV statistical data for the administrative staff of the army quartermaster.
- (5) Maintaining operational data on class II and IV supply items for the purpose of recommending establishment of changes in stock levels.
- b. Supply officer. When the depot company is operating independently, the supply officer, who is the warrant officer assigned to the depot commander's office, supervises the activities of the office, and acts as the depot commander's administrative assistant. He is in charge of requisitions and stock records; supervises inventories and the editing and filling of requisitions; and initiates action necessary to establish and maintain adequate stock levels.
- c. Supply chief. The supply chief, who is a master sergeant, is the chief clerk in charge of all clerical work in the office. Under the directions of the supply officer, the supply chief is responsible for the maintenance of all necessary records and stock record cards.
- d. Clerk typist. The clerk typist, under the supply chief's supervision, performs general clerical work. He sees that outgoing requisitions for necessary supplies are prepared and that all incoming requisitions are handled promptly.

- 24. COMPANY HEADQUARTERS. Company headquarters, under command of the company commander, performs general administrative duties, directs the company's activities as a whole, and performs normal supply and mess functions for the entire company. Company headquarters is composed of the company commander and 23 enlisted men.
- a. Company commander. The company commander is responsible for the administration, instruction, and training of the company. The company commander, under drection of the depot commander, is in immediate charge of the training program for all company personnel as well as attached personnel (AR 245-5 and TM 12-250).

b. First sergeant.

- (1) The first sergeant is the noncommissioned administrative assistant to the company commander. He transmits all the company commander's orders to the enlisted personnel and acts as the liaison between them and the company commander. (TM'S 12-250 and 12-255).
- (2) In addition to his knowledge of company administration, the first sergeant should have a thorough understanding of his organization and its operation. He should be thoroughly familiar with the Army supply system and with the role of the company within the system. He should understand supply problems and be able to train and supervise enlisted personnel in all depot procedures.

- c. Mess steward. The mess steward must organize the mess personnel and plan the use of available facilities to provide for any type of operation undertaken by the company. ranged systems should be established to insure satisfactory messing facilities for the company, when it is operating on more than one daily shift, and for a platoon when it is operating at a distance or temporarily detached from the company. Such systems must be flexible enough to provide for any type of emergency operation. The mess steward should be prepared to make a break-down of the company's rations for a detached platoon and to assist the company commander in selecting kitchen personnel and equipment for the platoon.
- d. Motor sergeant. The motor sergeant, under the direction of the company commander, is concerned with the operation and maintenance of all vehicles organic to the company. He supervises the work of the truck drivers and automotive mechanics and makes certain that all adhere strictly to the rules for preventive maintenance. He supervises the preparation of prescribed records and reports and maintains necessary liaison with the next higher echelon of maintenance.
- e. Company supply sergeant. The company supply sergeant acts as the company commander's assistant in all matters pertaining to unit supply. He is in immediate charge of the receipt, storage, and issue of individual and organizational clothing and equipment and expendable supplies. He prepares requests for supplies, checks supplies received and issued, and reports to the company

commander any discrepancies noted in quantity, quality, or physical condition of supplies (TM 12-250).

- f. Automotive mechanic. The company headquarters mechanics, under the motor sergeant's supervision, perform the necessary maintenance on company vehicles and equipment and assist in training newly assigned mechanics.
- g. Additional personnel. Additional personnel of company headquarters are listed in T/O&E 10-227. Technical qualifications of all these personnel are explained in TM 12-427. The cook's duties are explained in TM'S 10-205 and 10-405.
- 25. PLATOON HEADQUARTERS. Platoon headquarters, under command of the platoon leader, performs the necessary administrative and housekeeping duties and directs the activities of the platoon when it is operating as a separate unit.
- a. Platoon leader. The platoon leader, who has the rank of first or second lieutenant, is in command of the platoon. In addition to his normal duties in regard to training and discipline, he is in charge of platoon operation, both when the unit is functioning as an organization and when it is working in conjunction with the company. Since the platoon may be detached at any time for the operation of a depot, the platoon leader must make certain that the unit is ready for such an assignment. He must be ready to assume responsibility for the administration, supply, and security of the platoon when it is detached from the company and must constantly strive to make his platoon self-reliant. Plans

- should be made clear to all platoon members so that they will be ready at a moment's notice to shift from company operation to platoon operation of a supply point.
- b. Assistant platoon leader. The assistant platoon leader assists the platoon leader in executing his duties and must be prepared to assume his responsibility if the occasion arises.
- 26. SECTION. The section is concerned chiefly with the receipt, storage, and issue of supplies. The work of the section is supervised by the section leader, who is included among the key personnel of the company.

Section II. SETTING UP AND TAKING DOWN EQUIPMENT

- 27. SETTING-UP OPERATIONS. Since each platoon in the quartermaster clothing and general supplies depot company is capable of separate operation, setting-up operations may be conducted either by the company as a whole or by platoons, depending on how the company is operating. All personnel will be given appropriate duties to perform, with platoon leaders and section sergeants improvising setting-up operations when necessary. Setting-up operations for either the company or a platoon will be influenced by such factors as availability of closed storage facilities, distance of dump sites from incoming shipments, terrain characteristics, and labor supply.
- 28. TAKING-DOWN OPERATIONS. Taking-down operations will be conducted in a manner similar to that of setting-up operations.

CHAPTER 5

PREPARATION FOR OPERATIONS

Section I. RECONNAISSANCE AND SITE SELECTION

- 29. RECONNAISSANCE. a. Location. The general area in which the quartermaster clothing and general supplies depot company will bivouac and operate usually is determined by the command to which the unit is assigned or attached.
- b. Space requirements. Space for the following will be considered by the company commander, whether the company is operating as a unit or is divided into platoons:
 - (1) Company bivouac and administration.
 - Receiving, classifying, storing, and issuing supplies.
 - (3) Sufficient space for a turnaround for vehicles.
- c. Terroin. Requirements of the bivouac site are—
 - (1) Solid, level, well-drained ground.
 - (2) Accessibility to good road nets.
 - (3) Accessibility to the depot.
- d. Camouflage. Terrain features which provide good cover and concealment are necessary to minimize the danger from enemy observation and attack. Overhead covering to prevent aerial observation is desirable. However, trees as well

as bushes, rocks, and other natural concealment afforded by the site should be closely examined to determine whether the concealment will interfere with efficient operations.

- e. Weather. In cold weather, whenever possible, the company should be located in a sheltered area where natural protection is provided against both wind and cold. Hot weather locations should allow for as much air circulation as possible to help prevent spoilage of supplies.
- **30. SITE SELECTION. a.** The commanding officer of the depot, to which the quartermaster clothing and general supplies depot company normally is assigned, ordinarily will supervise the organization of the company as related to the depot's over-all operations. Arrangements generally will comprise the selection of a general layout, formulation of a field plan for lay-out of the depot area, and supervision of storage, dispersion of stocks, and protective measures.
- b. Factors which will be considered in a depot site area are—
 - (1) Available rail sidings for forward rail shipments and/or water sidings for possible water shipments forward, if water transportation is feasible.
 - (2) Available road net, with consideration given to the amount of traffic in and around the dumps.
 - (3) Distance of dump site from port or rail siding for incoming shipments.

- (4) Accessibility to consuming units.
- (5) Availability of covered storage space.
- (6) Sufficient space for dispersion.

Section II. PLANNING FOR OPERATIONS

- 31. LAY-OUT OF DEPOT. The commanding officer of the depot, to which the quartermaster clothing and general supplies depot company is assigned, will allocate space for each supply service present. In arranging the depot lay-out emphasis should be placed on speed and simplicity of operations.
- a. The depot should be located on main rail lines to the rear and on main highways leading to the front.
- b. Storage space should be laid out with separate areas for each supply service.
- c. The storehouse area should be laid out in sections which are connected by a road system.
- d. The size of storehouses should be such as to necessitate the minimum amount of labor in handling stores.
- e. Sufficient trackage should be available for the maximum number of cars. Main railway lines should be clear at all times, with no storage being attempted on or near tracks.
- f. Roads should be wide enough to accommodate two-way traffic.
- g. The lay-out should be such that deliveries will be made to organizations from lateral roads only and stocks will be replenished from perpendicular roads only. This system will permit un-

loading at the same time that issues are being made and also will speed up issuing.

- 32. TECHNICAL OPERATIONS. a. General. The quartermaster clothing and general supplies depot company expedites the flow of supplies along the supply line which, in the theater of operations, extends from debarkation ports to the extreme forward areas. Supplies arriving in a theater of operations, or procured therein, for the most part are stored temporarily in base depots. If urgently needed in advance areas, however, the supplies are sent forward immediately by the most practical means of transportation.
- b. Classification of supplies. The standard classification system of military supplies and the methods of handling each class are explained in FM 100-10. The quartermaster clothing and general supplies depot company is concerned primarily with operation of the class II and IV sections of the army or base depot to which it is assigned or attached. Quartermaster supplies with which it is concerned consist of the following:
 - (1) Class II. Class II supplies consist of supplies and equipment for which allowances are established by tables of organization and equipment, tables of basic allowances, tables of allowances, equipment modification lists, or other lists or letters which prescribe specific allowances for a unit or for an individual. Examples of class II supplies are clothing, weapons, mechanics' tools, spare

- parts, and supplies for authorized equipment.
- (2) Class IV. Class IV supplies consist of supplies and equipment, except Air Force supplies, for which allowances are not prescribed or which are not classified otherwise. Examples of class IV supplies are construction and fortification materials. Class I, II, III, and V items may be subject to class IV issue when issued in excess of prescribed allowances or for purposes not regularly authorized.
- c. Movement of supplies. Supplies of all classes usually are moved forward to meet operational requirements, with all available means of transportation being utilized.

CHAPTER 6

OPERATION OF THE UNIT

Section 1. METHODS OF OPERATING

- 33. ASSIGNMENT OF DEPOT COMPANY. The quartermaster clothing and general supplies depot company may be assigned to one of several types of depots in a theater of operations (par. 4).
- a. Communications zone. In the communications zone the company normally is assigned to a quartermaster depot located in the communications zone. If the communications zone depot is a general depot (stocking supplies stored by two or more services), the depot company operates under the quartermaster section of the depot.
- b. Combat zone. In the combat zone the company normally is assigned to an army field depot. An army depot generally is a branch depot (stocking supplies stored by a single service) under army control, where supplies are received from the communications zone or from local sources in the army area. An army depot usually is much smaller than a communications zone depot, stocks fewer supplies, and is more easily moved.
- 34. ORGANIZATION OF DEPOT OFFICE. When the quartermaster clothing and general supplies depot company has been designated by higher

authority to operate a depot (fig. 9), the following type of organization normally will be established:

a. When operated by company. When the company is assigned to one depot, the platoon head-quarters sections of each of the three operating platoons and that of the depot headquarters platoon may be pooled for operation of the depot office. Utilization of personnel, either as indi-

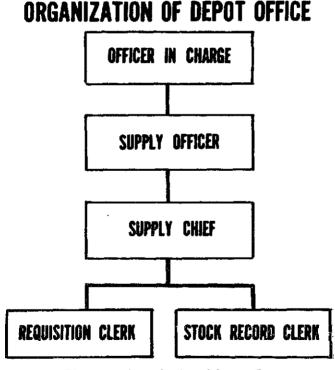


Figure 9. Organization of depot office.

viduals or as platoons, is at the discretion of the depot commander.

- b. When operated by platoon. If the depot is operated by one platoon, operation of the depot office is the function of the platoon headquarters section of the platoon. The head of the depot office usually will be the platoon officer in charge of the platoon headquarters section.
- c. Requisition branch. The requisition branch, supervised by the supply chief, is responsible for handling both incoming and outgoing requisitions. Procedures (par. 35b) established should be in accordance with TM 38-403, as modified by the theater commander.
- d. Stock record branch. The stock record branch, supervised by the supply officer, is responsible for all depot bookkeeping (par. 35c). Exact procedures will be as prescribed by TM 38-403.
- 35. PROCEDURES IN DEPOT OFFICE. a. Depot commander. Under the general policies prescribed by higher headquarters the depot commander establishes the procedure for administration and operation of the depot. Using the other commissioned officers of the company as his representatives and delegating suitable authority to them, he establishes channels for the accomplishment of all necessary work. He issues directives for police and fire protection in the depot, for the employment of depot transportation facilities, for the use of civilian labor, and for all other matters pertaining to the care of supplies and to prompt, efficient service by the depot. Normally,

accounting procedures will conform, in general, to AR 35-6520 and TM 38-403.

- b. Processing requisitions. Conforming at all times to the procedure established by the depot commander, the requisition clerk generally will take the following steps in processing requisitions on the depot and in preparing requisitions for stock replenishment:
 - (1) Requisitions on depot.
 - (a) A serial number will be placed on each requisition received and the requisition recorded in the incoming requisition register.
 - (b) Each requisition will be edited to determine whether the nomenclature and the grouping of items are in conformity with authorized lists for the theater; whether an adequate description of the required supplies is furnished (including, if necessary, piece marks, drawing numbers, or model numbers); and whether the amounts being requisitioned are within prescribed allowances.
 - (c) The original and a copy of the incoming requisition (edited) will be forwarded to the storage area to be used as a tally-out.
 - (d) A copy of the requisition will be filed in the suspense file until the requisition has been filled, whereupon the copy and the signed original will be filed with the other completed requisitions.

- (2) Requisitions for stock replenishment.
 - (a) Outgoing requisitions will be prepared from stock replenishment sheets after the receipt of the sheets from the stock record clerk or on instructions by the chief clerk.
 - (b) A serial number will be placed on all requisitions originating in the depot and the requisitions will be recorded in the outgoing requisition register.
 - (c) Incoming tallies will be checked against the proper requisitions, which have originated in the depot.
 - (d) All completed requisitions will be filed.
- (3) Back orders. When a requisition, presented by an organization for an approved issue, cannot be completely filled from available stocks, the following action will be taken by the depot commander:
 - (a) Immediately determine whether a suitable authorized substitute is available for issue (except in cases of prescribed substitutes, the requisitioning organization will have the right to judge the suitability of the substitute item).
 - (b) Issue substitute items to the extent of availability against the requisition.
 - (c) Requisitions, unfilled due to nonavailability of supply, will be placed in active back-order files and will be checked frequently, at least once in

- each 10-day interval, against appropriate "tally-ins" or stock records.
- (d) In order that adequate stocks may be maintained of items in short supply, stock status reports and periodic requisitions will show back-order position.
- (e) Upon receipt of back-ordered supplies and equipment in stocks, items on back-order will be allocated and the requisitioning organization will be notified promptly of availability. On items for organizations that usually call at depot, the back-order requisition will be filled and items segregated awaiting call of organizations. If no action is taken by the requisitioning organization within 15 days, the items will revert to stock and back-order will be cancelled.
- (f) When an organization moves from the area of supply responsibility of one echelon to that of another, the back-order requisitions of the organizations will be removed from file and forwarded to the appropriate command with complete statements of supply action taken, including date items are expected to become available. Such requisitions will be honored by the new command as of the original date of the requisition in keeping with existing operational priorites and allocations. The moving or-

- ganization will be responsible for advising the depots, holding back-order requisitions, of their destination.
- (4) General. In general, all requisitions which have not been completely filled will be kept in active back-order files, in the appropriate supply echelon, until completely filled. This policy will be adhered to with the following exceptions:
 - (a) Requisitions may be canceled at the request of the requisitioning organization.
 - (b) Requisitions covering Class IV items (except for approved projects) will be canceled after 30 days if unfilled, and back-orders will not be set up unless specifically requested by the requisitioning organization.
 - (c) Expendable items will not be backordered in cumulative quantities to exceed the estimated normal consumption requirements.
 - (d) Back orders remaining unfilled at the end of 90 days will be reviewed and canceled with the concurrence of the requisitioning organizations. New requisitions for any item, for which the need continues to exist may be resubmitted and the new requisition will be given priority as of date of the original requisition. A statement should be included on cover sheet, as additional justification, that items have

been on back-order since the date of original requisition.

- (5) Depot commanders are responsible for—
 - (a) The maximum utilization of suitable authorized substitutes for nonavailable items, to reduce the number of back-order requisitions.
 - (b) Constant check of back-order requisitions against stock records to assure that requisitioning organization is notified without delay after items become available.
 - (c) Verifying, at reasonable intervals, that requisitioning organization desired the back-order kept active.
- (6) Commanders of requisitioning organizations are responsible for—
 - (a) Informing the supply agency, at the time the requisition is presented, when it is not desired that unfilled items be placed on back-order.
 - (b) Requesting appropriate supply agency to cancel the back-order requisition before any item on back-order is re-requisitioned.
 - (c) Notification of the appropriate supply agency when items on back-order are no longer required.
 - (d) Notification of appropriate supply agency when a move is to take place, as to disposition desired on back-order requisition.

- c. Stock records. The stock record clerk of the depot office at all times conforms to the procedures prescribed by the depot commander. In general, the procedures will consist of—
 - (1) Preparation of stock record cards for all property stocked by the depot.
 - (2) Posting of the stock record cards from all types of valid vouchers. These consist of shipping tickets; receiving reports; inventory sheets; expenditure reports; over, short, and damaged reports; survey reports; and any improvised forms used to expedite supply.
 - (3) Maintenance of a voucher register, as prescribed by the theater commander.
 - (4) Preparation of stock replenishment requests and forwarding them to the requisition branch. Such requests are prepared at predetermined dates when stock levels approach the established minimum, or at the discretion of the commander.
 - (5) Preparation and maintenance of stock record accounts for all property which is carried for issue on memorandum receipt.
- 36. ORGANIZATION OF STORAGE AREA. Personnel assigned to the storage area are responsible for receiving, storing, packing, and issuing all supplies stocked by the depot (fig. 10).
- a. When operated by company. When the company is assigned to the operation of one depot, warehousemen and other personnel may be selected from all four platoons and pooled for opera-

tion of the storage area. Utilization of personnel, either as individuals or as platoons, is at the discretion of the depot commander.

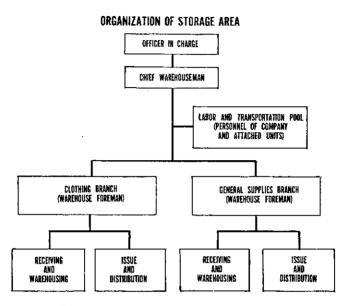


Figure 10. Organization of storage area.

- b. When operated by platoon. If the depot is operated by one platoon, operation of the storage area is the function of platoon personnel assigned to this duty. The platoon leader will designate a non-commissioned officer to be in charge of the storage area.
- c. Branches. Operation of the storage area normally is divided between two sections—a clothing section and a general supplies section. The part of the storage area assigned to each sec-

tion is in the charge of a designated warehouse foreman, who is assisted by an assistant warehouse foreman and other necessary personnel. The organization of the storage area must be kept as flexible as possible. Storage personnel, even though they normally may be assigned to one section and to one specific job, must understand the work of all branches and be prepared to shift jobs readily.

- (1) Receiving and warehousing. Receiving and warehousing personnel receive, unload, and store supplies stocked by their sections.
- (2) Issue and distribution. Issue and distribution personnel fill all requisitions, do all necessary packing and crating, and supervise the loading of supplies for distribution.
- d. Inventories. Intervals at which inventories will be taken usually are prescribed by higher authority.
- 37. WAREHOUSING. The methods of warehousing that have proved of value in the continental United States will be used in the theater of operations, where a warehouse may be no more than a cave or a shack and where dunnage probably will have to be improvised. Wherever possible, existing storage facilities should be used (fig. 11). The basic warehousing methods prescribed in TM 10-250 should be followed so far as practicable.



Figure 11. Native hut used for storing supplies.

- a. Space lay-out. Considerable time and effort must be devoted to the planning of space lay-out and the floor, to achieve maximum efficiency in storing and issuing supplies.
 - (1) Fast-moving items. A primary consideration in space lay-out is the frequency of demand for various types of supplies. Fast-moving items must be stored in areas where trips from stacks to shipping areas will be as short as possible.
 - (2) Heavy items. Heavy items must be stacked where the flooring capacity is greatest and, if possible, close to the shipping point. Such items probably will not be stacked high and, consequently, should be stored in low-ceilinged areas, wherever practicable.

- (3) Light items. Areas with the highest ceilings should be reserved, if possible, for light items which can be stacked to the maximum height. All available space should be utilized by building stacks and columns to the greatest practicable height.
- (4) Receiving and shipping. The receiving and shipping area should be located in such a manner that shipments of supplies may be received at the depot without interfering with the simultaneous issue of other shipments. Provisions should be made, in or near the receiving area, for any repacking of supplies which may be necessary before storage. Supplies should be moved directly from carrier to stack, wherever possible.
- (5) Packing and crating. The principal packing and crating area in a depot should be located convenient to the shipping area. If possible, all packing and crating should be done in one area, but if necessary, additional areas may be established.
- (6) Loose-issue. If a loose-issue area is established in the depot or in each warehouse, it should be located convenient to all stacks of supplies. The area must be large enough to provide storage space for a reasonable quantity of all supplies stored so that all items may be readily accessible.

(7) Items subject to pilferage. Small items which may be subject to pilferage must be stored where they can be under constant surveillance of responsible personnel. An area for the storage of such items should be located near the headquarters of the storage section and should be laid out so that it can be guarded easily at all times.

b. Methods of storage.

- (1) Block system. All supplies which are not kept in racks, bins, or box pallets are stored in blocks. A block of supplies is a stack one or more units high, two or more units deep, and two or more units wide. A block of supplies is always stacked by rows from the wall to the aisle. Supplies also must be withdrawn from a block by rows from the aisle toward the wall. They should never be withdrawn from across the front of a block. Technical information in regard to stacking may be found in TM 10-250 (figs. 12, 13, and 14).
- (2) Separation of types of items. Supplies are grouped in storage according to class. They are further separated according to type, expected rate of issue, and conditions in the storage area.
- (3) Placement of new shipments. Supplies of any type are issued from a depot in the order in which they are received. Consequently, the depot must take care

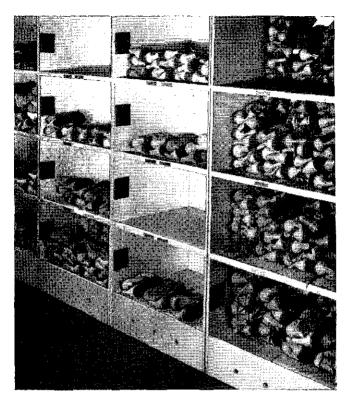


Figure 12. Shoes in bins.

not to store new shipments in a manner that will block the issue of supplies of the same type previously received. Attention to the row system of block stacking will eliminate the major difficulties in placing new shipments.

c. Condition of supplies. Supplies placed in storage must be in such condition that they will keep

satisfactorily. Broken or torn containers must be repaired, or their contents must either be repacked or transferred to a broken-issue area for special handling.



Figure 13. Tents and paulins in box pallets.

d. Locator system. The basis of a stock locator system is a record of space lay-out which indicates the size, shape, and location of all storage areas and assigns identifying symbols to all such areas. With such a record available, a master stock locator chart showing the general location of all supplies can be maintained in the depot,

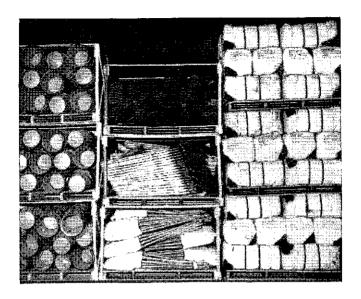


Figure 14. Storage of general supplies.

and detailed locator cards can be prepared in each storage area for the supplies stored therein. Such cards should show at least the nomenclature, date of receipt, and exact location of all items.

e. Space requirements. A general guide for gross storage requirements in square feet of space per man per day is as follows:

	Closed	Open	Total
Clothing and equipment	0.0146	0.0019	0.0165
General supplies	.0014	.0007	.0021

These requirements are based on experience in the European theater of operations and allow for 8 foot stacks and 40 per cent unusable space. These requirements do not include a dispersion factor for setting up storage tents in open fields. A normal ratio of storage space to dispersion is 1 square foot of gross storage space to 40 square feet of dispersion space.

- 38. CLOSED STORAGE. a. Space utilization. Since the amount of space available for closed storage in a theater of operations usually will be inadequate, every cubic foot of available space should be utilized with great care. A priority system for placing supplies therefore should be established.
- b. Space requirements. An ideal warehouse is used as the basis for computing the number of square feet required for storing supplies. From this ideal number allowances can be made for storage in buildings not designed as warehouses, for storage in the open, or for other types of storage. Factors in computing ideal storage space are—
 - (1) Weights and cubic measurements of table of allowance and table of equipment items required for a model stock.
 - (2) Amount of net space required for storage of supplies.
 - (3) Amount of space consumed by aisles, fire aisles, obstructions (such as posts), unusable corners in the warehouse, and sorting space.

- (4) Floor load capacity and height of stacks, based on floor load or materials-handling equipment.
- (5) Computation of net space required for storage of items. Net space required to store all items of a model stock for a given number of men is computed and reduced to the number of pounds per man per day for each class or group of items. From this per man figure storage requirements for any number of men can be computed.
- (6) Estimate of average net usable space. The average net usable space in any warehouse may be estimated roughly as 60 percent of the total gross space. This leaves 24 percent for aisles or lost space and an additional 16 per cent as a safety factor. This estimate is computed by taking the net square feet of storage space required and adding 40 percent to obtain the gross space needed.
- 39. OPEN STORAGE. Open storage means the storage of supplies with no protection or with the protection of tarpaulins, tents, huts, or sheds. Since an army depot will have to rely very largely on such facilities, the depot company must be trained thoroughly in all aspects of open storage.
- a. Roadways. A system of roadways must be established that will utilize existing roadways as far as possible and, at the same time, produce the most efficient use of manpower in loading

and unloading supplies. Such a system must provide for bringing vehicles as close as possible to the stacks and at approximately the same level. Roadways must be as hard-surfaced as possible and should be reinforced where necessary with logs, coral, or other available material. They should be wide enough to allow travel at the same time that trucks are being unloaded.

- b. Loading points. If possible, loading points should be established to bring truck beds to the level of supplies and make lifting unnecessary.
- c. Aisle location. Aisles must be numerous enough for all supplies to be convenient to loading points. They must be wide enough to accommodate sufficient personnel for speedy operations and should be laid out to make the most efficient use of conveyors and other materials-handling equipment.

d. Size and arrangement of stacks.

- (1) Types of stacks. Stacks may be either rectangular or pyramidal. In huts and similar structures they should be as high as the nature of the supplies and the available space will permit, but in unroofed storage, stacks should not be too high for effective camouflage.
- (2) Building method. Rectangular stacks to be covered with paulins should be built with sloping tops so that rain water will drain off (figs. 15 and 16).
- e. Dunnage. Dunnage may be made of lumber, logs, railroad ties, pallets, or steel matting. Bamboo, coral, or other suitable materials also may be

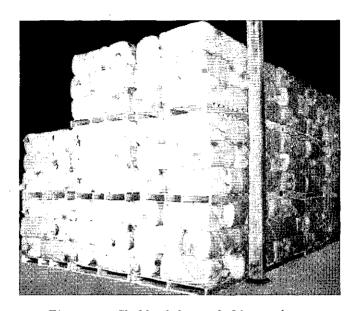


Figure 15. Clothing bales stacked in warehouse.

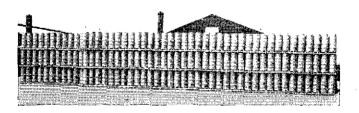


Figure 16. Stacked corrugated cans.

used. Because of its porous nature, coral makes an excellent surfacing material for supply sites. However, since supplies placed directly upon coral will absorb moisture, coral never should be used as a substitute for dunnage; a combination of coral and dunnage is necessary for the maximum protection of supplies.

- (1) Wrecked and demolished buildings are sources of lumber that can be salvaged for dunnage purposes. New lumber sometimes can be obtained from supply vessels which also have used the lumber for dunnage.
- (2) In emergencies boxes and crates can be placed under supplies. They do not allow as much ventilation or give as much coverage as when they are knocked apart, reassembled into improvised pallets or racks, and laid out on supporting material, but they do keep supplies off the ground.
- (3) Crated supplies often can be stacked for a short time on 2 by 4's, 2 by 6's, logs, or other supports when the ground is firm or the load is light enough not to sink into the earth. However, if supplies are to be stacked for a long period, better dunnage is necessary.
- (4) Salvaged airplane landing mats make excellent dunnage. Lightweight, rigid, durable, and perforated, these mats are laid on logs (fig. 17).
- (5) Prefabricated dunnage has a number of advantages. It can be prepared in

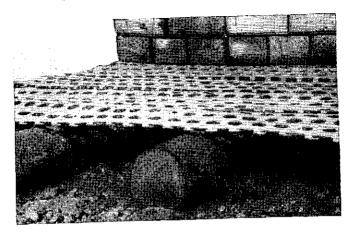


Figure 17. Improvised dunnage.

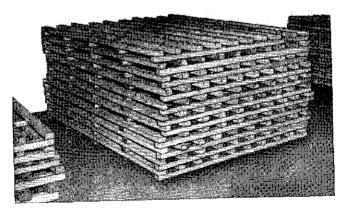


Figure 18. Dunnage ready for use.

- advance, moved easily from place to place, and used countless times. Eight 5- by 7-foot racks make the necessary dunnage for a 14- by 20-foot stack (fig. 18).
- (6) In cases where dunnage can be laid out and built before the arrival of supplies, such supplies can be received, handled, and stored in a more orderly fashion. Containers can be placed on the platforms without restacking. Wide avenues between stacks lessen traffic congestion.

f. Covering.

- Paulins. Paulins may be placed directly over stacked supplies or used to cover any type of supporting framework.
 - (a) In tropical climates, where it is essential to provide for the maximum circulation of air on all sides of containers, paulins should not be placed directly over supplies except for short periods. In any event, to permit necessary ventilation and prevent mildew and rust, tarpaulins placed directly over supplies should not cover the bottom third of the stack and, if possible, should be supported so that humid air is not trapped around containers.
 - (b) Paulins covering supplies should be held down securely. Ropes may be tied

- to cases in the stack or to pins driven into the ground.
- (c) One of the most effective uses of paulins is in the construction of a shed (fig. 19). This tent-type shed consists of a paulin spread over a triangular wooden frame. Such a structure can be built to any desired size, is usually light and easily handled, and provides both protection and ventilation for supplies. Edges of the structure should extend beyond all sides of a stack so that rain will not run onto containers.

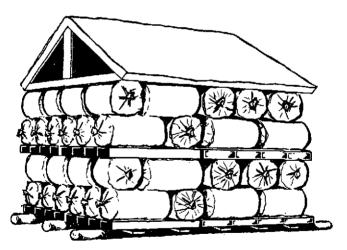


Figure 19. Paulin shed.

- (2) Tents.
 - (a) Tents provide ready-made outdoor storage space and, whenever available,

may be used for the protection of supplies. A storage tent is 17 feet 10 inches wide, 20 feet 5 inches long, and 13 feet high in the center and provides 364 square feet of floor space. A pvramidal tent (M1934) is 16 square and 11 feet high in the center and provides 256 square feet of floor space. A squad tent (M1942) is 16 feet wide, 32 feet 9 inches long, and 12 feet high in the center and provides 524 square feet of floor space. Various other types of tents also are suitable for storage and may be used by the depot if they are available (FM 20-15).

- (b) In tropical climates, the sides of tents should be left up and the doors should be open in order to provide maximum circulation of air. When the tent is secured in anticipation of high wind, the doors should be closed, the lines tightened, and the walls well anchored to tent pins. If high winds are accompanied by rain, tightening due to shrinkage will require adjustment of fastening.
- 40. PACKING AND CRATING. A packing area should be established convenient to the principal loading point and, if possible, to the supplies expected to require the most packing. The extent of packing necessary for supplies procured locally is dependent upon their nature, the time they are

to be kept in storage, and the manner in which they are to be shipped. Supplies received from overseas are packed according to Joint Army-Navy Specifications for Packaging and Packing for Oversea Shipment (Army No. 100–14B). Depot personnel concerned with packing should be familiar with the methods explained in this publication and with those explained in current bulletins and specifications of the Quartermaster Corps.

- 41. LOADING. a. General. Although service and truck company personnel usually will be available, personnel of the quartermaster clothing and general supplies depot company must be thoroughly familiar with the methods of loading and unloading trucks and railway cars. In any loading or unloading operation the number of workers should be limited for effective operations.
 - If a truck is being unloaded over the tailgate, only two men are required inside the truck. If the truck is being unloaded over the side, three men may work more effectively.
 - (2) An amphibious truck (DUKW) can be unloaded by four men working inside the vehicle.
 - (3) A freight car normally can be unloaded by 3 men, a checker-operator and 2 laborers.

b. Time estimate.

(1) At depots. Below is given the time estimate for handling packaged or bundled

loads at depots, supply points, or using units under average conditions, with a 6-man crew for each truck or trailer.

Operation	Loading or t	inloading time nutes)
•	Day	Night
Loading	30	60
Unloading		30

(2) In the field. Below is given the time estimate for handling prescribed loads, under field conditions, where the amount of labor available is unlimited.

Vehicle	Loading or 1	inloading time nutes)
	Average	Minimum
2½-ton truck		30
1-ton trailer	20	12

- c. References. Methods of loading trucks are discussed in TM 21-300 and TM 21-305. Methods of loading other motor vehicles and freight cars are illustrated in TF 10-1239, TF 10-1240, and TF 10-1241.
- 42. LABOR. Labor requirements for handling supplies are computed on the basis of one-half ton per man per hour for 10 hours each day. Labor

is apportioned to the company from quartermaster service company (T/O&E 10-67), from detachments of T/O&E 10-500, from civilian labor, and from prisoner of war labor.

a. Service troops.

- (1) Service troops are furnished to the depot on the request of the depot commander. In the combat zone they will be provided by the army quartermaster and in the communications zone by the quartermaster command to which they are assigned.
- (2) Service troops are trained in working units and will prove most efficient when the units are kept intact. Men of each squad, for example, work best under their own leader, each man knowing from experience his particular assignment in the group.

b. Civilian labor.

- (1) If necessary, provision should be made for training civilian labor in the work it is expected to perform.
- (2) Records of personnel employed and man-tons per day of tonnage loaded and unloaded will be maintained for future planning.
- (3) Work should be laid out in a progressive pattern so that, upon the completion of each successive task, the next assignment can be begun without delay.
- (4) Civilians with specialized training and background should, whenever possible, be given tasks employing their skill.

- (5) Educational aids to improve civilian efficiency are worth while. For example, pocket-sized booklets with depot terms in several languages are useful among civilians of different languages working in one depot.
- (6) Civilian leaders should be designated and fully informed as to the duty to be performed. They, in turn, can supervise their crews, with checks being made periodically by company depot personnel.
- c. Prisoner of war labor. Prisoner of war labor may be employed in the depot in accordance with the provisions of the Geneva convention (TM 19-500).
- 43. **DEPOT TRAFFIC CONTROL**. Necessary traffic regulations in the depot area are issued by the depot commander or by the officer designated by him as traffic control officer.
- a. One-way motor traffic through the depot area should be required, whenever possible.
- b. Roads passing warehouses or other storage areas should be wide enough for trucks to back up and park across one side of the road without blocking the flow of traffic.
- c. Signs pointing toward the depot should be posted throughout the surrounding country for the direction of vehicle drivers traveling to the depot. In the depot itself an adequate number of signs should be erected to direct traffic to all depot areas, designate one-way roads, establish speed limits, and in all other ways contribute to

the smooth flow of traffic into, through, and out of the depot. In addition, warehouses, bays, and all other storage areas should be marked clearly.

- d. Generally, every guide and all military police assigned to traffic control should be provided with a traffic plan in graphic form. This will enable them to direct all vehicles to the proper area.
- e. As part of the traffic control plan, the depot may assign one or more guides to each group of trucks arriving at the depot. The guides will stay with the trucks until they leave the depot, directing the drivers to all loading or unloading points.
- f. To help avoid traffic jams, parking areas should be provided outside the depot area and a plan developed whereby the control point personnel can phase trucks from the parking area to the loading and unloading area in accordance with existing plans.
- 44. TRANSPORTATION AND MOTOR MAINTENANCE. a. Organic transportation. Organic transportation is authorized for the quartermaster clothing and general supplies depot company by T/O&E 10-227. Such transportation is for the internal use of the depot company in its administrative and operating functions. Whenever necessary, transportation facilities for receiving and issuing supplies and for moving personnel, equipment, and stock must be requested by the depot commander through prescribed channels.
- b. Organizational maintenance. First echelon organizational maintenance on organic vehicles is performed by the drivers. Second echelon or-

ganizational maintenance is performed by the automotive mechanics assigned to company headquarters.

- 45. NIGHT OPERATION. In order to avoid hostile aerial observation, particularly for the forward depots, depots frequently may find it necessary to operate at night. If operations during darkness are essential for security reasons, receipt and issue of supplies will need to be exceptionally well planned and carefully executed, in order that speed and accuracy of service may be achieved. If it is necessary to operate only at night in order to maintain the supply flow, lighting facilities provided by T/O&E 10-227 will be utilized. If additional lighting is needed, the depot commander may find it possible to secure additional equipment from the prescribed supply channels.
- 46. STOCK CONTROL PROCEDURE. a. Quantity. The basic principles of stock control in the combat zone are set forth in FM 100-10 and in other Department of the Army publications listed in paragraph 54. In general, stocks must be kept in such quantity that the flow of supplies will be sure and rapid.
- b. Reserve stock. Levels of all supplies maintained in the combat zone are established by the army commander with prior approval of the theater army commander, subject only to the limitations placed upon supply by the commanding general of the theater of operations. To guard against disruption of supply lines from the communications zone, an army depot normally keeps suffi-

cient reserve stocks of class II and IV supplies for operation for a minimum of 15 days. This reserve is increased in proportion to the danger of enemy attacks on the supply lines.

- 47. CLOTHING AND SHOE TARIFFS. A table showing the quantity of each size of an item of clothing or footwear required for fitting a given number of men is called a tariff of sizes. In maintaining model stocks or submitting requisitions for requirements, the difference between the stock on hand by size and the total quantity necessary is ordered. For example, if 500 pairs of shoes are required and there are on hand 2 pairs of size 6½C, then no 6½C shoes should be ordered, since the quantity of this size on hand meets prescribed tariff requirements for a stock of 500 pairs. Clothing and shoe tariffs are used in acquiring initial depot stocks (SB 10-438).
- 48. OPERATING SHIFTS. Shift schedules for the clothing and general supplies depot company will be influenced by such factors as the tactical situation, the means of transportation, and the climate.
- a. With an ample labor supply the depot company can operate effectively three 8-hour shifts.
- b. Without a large labor force the depot company can effectively operate two 12-hour shifts.
- c. Under certain conditions the depot may have to operate on a 24-hour schedule.
- d. In the tropics, if the work is arduous, the depot company should operate three 8-hour shifts.

Section II. RECEIVING AND ISSUING SUPPLIES

- 49. SOURCES OF SUPPLIES. a. Communications zone. When assigned to a quartermaster depot (T/O&E 10-250-1), the quartermaster clothing and general supplies depot company will issue supplies obtained by the depot from the zone of the interior, from allied and neutral countries, and from local sources.
- b. Combat zone. When attached to headquarters and headquarters detachment, quartermaster battalion (T/O&E 10-536), the depot company will issue supplies obtained by army supply points from the communications zone and from local sources in the army area.
- 50. RECEIVING SUPPLIES. a. Before arrival. Before a shipment of supplies arrives in the depot, by whatever means of transportation, certain preparatory steps should be taken to insure that there will be no delay in receiving the supplies. The exact procedure is at the discretion of the depot commander but, in general, the following steps are necessary:
 - (1) The officer assigned to the storage area requests information concerning incoming shipments from the depot transportation officer. Such information should include the number and content of railroad cars, trucks, or ships expected; the number of separate rail cars; and the names and numbers of ships.
 - (2) The storage officer then informs the transportation officers or the traffic con-

- trol officer where and, if necessary, in what order he wishes to have railroad cars or trucks spotted for unloading.
- (3) The warehouse foreman and the warehouse men who are to receive supplies are notified in order that they may have men and equipment in readiness for unloading. If a rail crew responsible for unloading is organized in the depot, the individual in charge of the detail also is advised concerning incoming shipments.
- (4) Checkers and inspectors are assigned as necessary.
- b. At arrival. Exact procedure at the time shipments arrive is at the discretion of the depot commander. For planning purposes, however, the following steps may be considered as general procedure:
 - (1) Supplies are unloaded from the carrier, inspected, and checked against shipping documents (pars. 51-52).
 - (2) Supplies are placed in storage.
 - (3) Supplies are tallied in on shipping documents (or additional tallies, if necessary) at warehouses or storage areas.
 - (4) Location of supplies is indicated in each stock locator system (par. 37d).
 - (5) Stock record cards are posted to indicate receipt and location of supplies. Tally-in figures on shipping documents serve as authority for posting stock record cards.

- 51. INSPECTING SUPPLIES. To prevent the issue of spoiled or damaged articles, qualified personnel of the depot company inspect all shipments of supplies received in a depot, whether sent from the zone of the interior or acquired locally. Periodic inspections of supplies in storage also are made, as directed by the depot commander. Information in regard to the inspection of supplies is contained in TM 10-250.
- **52.** CHECKING SUPPLIES. a. Accurate checking of incoming supplies is possible only when each shipment is checked immediately upon receipt. If warehouse operations are not delayed, a triple check of incoming shipments is advisable.
 - (1) A check when supplies are unloaded from the carrier.
 - (2) A check when supplies are stored (unnecessary if supplies are transferred to storage direct from the carrier).
 - (3) A check when packages are stacked or opened in order to determine whether the detailed inventories received from the shippers are accurate.
- b. A check made too long before a shipment leaves may not agree with the actual quantity or quality of supplies issued. Consequently, outgoing supplies are given a final check immediately before they leave the depot.
- 53. ISSUING SUPPLIES. a. In communications zone. The depot company issues supplies to units designated by higher headquarters to receive supplies from the depot to which the company is assigned.

- b. In combat zone. The depot company issues supplies to divisions, to corps troops, to army troops, to separate battalions and, when directed by higher authority, to air force units (common items used by air force personnel).
- c. Procedure. Procedure for issuing supplies normally will be as directed by appropriate base or army commanders.
 - (1) When a requisition arrives in the depot (usually brought by the unit requesting supplies), it is edited by the requisition branch of the depot headquarters.
 - (2) The approved requisition is sent to the storage area, where the shipment is made up. This may be done from a loose-issue area, where certain quantities of all supplies are kept, or from individual warehouses or storage areas.
 - (3) The supplies to be issued are checked.
 - (4) Shipping documents are prepared. If a representative of the receiving unit is present, he signs shipping documents certifying to the receipt of the supplies.
 - (5) Stock record cards are posted to indicate the issue of supplies.
 - (6) Records in the depot stock locator are adjusted to take account of supplies issued.
- 54. PROPERTY ACCOUNTING. The theater commander is authorized to prescribe procedures for property accounting to be followed within the theater. As a basis for action, general Department of the Army doctrine in regard to property

accounting is explained in the following publications:

- a. AR 35-6520, Property Accountability and Responsibility.
- b. AR 35-6560, Receipt, Shipment, and Issue of Property.
- c. AR 735-150, Accounting for Lost, Damaged, and Destroyed Property.
 - d. FM 100-10, Administration.
- e. SR 735-150-1, Accounting for Lost, Damaged, or Destroyed Property.
 - f. TM 38-403, Station Supply Procedure.

Section III. RECORDS AND REPORTS

- 55. TECHNICAL REPORTS AND RECORDS. a. Types of reports. Since the quartermaster clothing and general supplies depot company normally operates under command of an army or base depot, higher headquarters generally will prescribe the type of records and reports which the company will maintain and submit. Reports will vary with specific supplies handled, methods of transportation used, and composition of labor personnel. Generally, the company may be expected to prepare reports similar to the following:
 - (1) Tonnage handled.
 - (2) Amount of storage space occupied and amount available.
 - (3) Percentage of accomplishment of the company's quota as related to the depot's daily mission.
 - (4) Break-down of issue to receiving units.

- (5) Tonnage received from various ports, trucks, railheads, and other points.
- (6) Statistics of work performed by labor detachments, civilians, and prisoners of war.
- (7) Additional labor required.
- b. Forms used. The type of forms used for periodic reports to higher headquarters will conform to directed procedures.
- c. Vehicle records. Maintenance records for vehicles will be kept as prescribed by AR 700-105. Weekly, semimonthly, and monthly service records for preventive maintenance will be completed (see TM 37-2810).
- **56. STOCK CONTROL RECORDS.** If the depot is operating in an army service area, the basic property records to be kept are as follows:
- a. Stock record account. The stock record account consists of a stock record card set up for each item of property or component thereof. The stock record card shows date, voucher number, amount received, amount shipped, and balance on hand. Each entry on the stock record card must be supported by a voucher, which serves as authority for increasing or decreasing balances.
- b. Voucher register. The voucher register is an indexed file of debit and credit vouchers, each lettered D or C and all numbered serially throughout the fiscal year. No voucher is posted to the stock record account before it is entered in the voucher register. Valid vouchers consist of shipping tickets; receiving reports; inventory sheets; expenditure reports; over, short, and damaged

reports; survey reports; and any improvised forms used to expedite supply.

- c. Memorandum receipt account. When property is issued on a loan basis, the issuing officer is still held accountable, but the receiving officer signs a memorandum receipt for the property and thereby assumes responsibility.
- 57. UNIT JOURNAL AND HISTORY. The depot company will maintain a unit journal and history. The journal and history should be an accurate, objective record of events, actions, and operations involving the company. All available sources, including personal recollections of personnel involved, should be used. The journal and history also should contain information and suggestions which may be used to advantage by similar units operating under similar conditions. The document will be forwarded to the next higher head-quarters with notation for delivery to The Adjutant General, Department of the Army.

Section IV. OPENING-UP, TAKING-OVER, AND CLOSING-OUT OPERATIONS

58. OPENING-UP OPERATIONS. a. As soon as the quartermaster clothing and general supplies depot company is set up for operation, the communications link between it and the units it will serve must be established. The company, in accordance with directives of higher headquarters, prescribes the methods and procedures for the receipt of supplies by receiving units at army supply points or at depots in the communications zone.

- b. Generally, the company will inform the receiving units of the availability of supplies, type of operating supplies on hand, and any critical shortages that may exist.
- 59. TAKING-OVER OPERATIONS. The company commander, on taking over operations, will do the following:
- a. Check the inventory against property, equipment, and supplies.
 - b. Secure transfer of unit funds.
 - c. Check roster against table of organization.
 - d. Check morning report against roster.
 - e. Check duty roster.
- f. Check service records and qualification cards of personnel.
- **60.** CLOSING-OUT OPERATIONS. The company commander, on closing out operations, will do the following:
- **a.** Prepare a motor march plan and instruct the company personnel therein.
- b. Notify higher headquarters of the exact time when operations will cease in the area and of the approximate time when operations will begin in the newly designated area.
- c. See that all equipment has been loaded and that the vacated area is policed properly.

CHAPTER 7

SECURITY, CAMOUFLAGE, AND DEMOLITION

- 61. SECURITY. a. Company security. The commander of the depot company, in cooperation with the commander of the depot to which the depot company is assigned, will develop plans for the security of the depot company.
 - (1) Pilferage and sabotage. The depot company commander will be responsible for maintaining an interior guard sufficient to provide security against pilferage and sabotage.
 - (2) Fire. The depot company commander will be responsible for the preparation of fire plans for his unit. A unit fire marshal will be designated and all personnel will be instructed in fire-prevention and fire-fighting measures.
- b. Bivouge security. Maximum dispersion of all vehicles, personnel, and equipment is necessary. Posting of adequate guards and gas sentries and construction of slit trenches and other hasty fortifications also are necessary.
 - c. Individual security.
 - (1) Proficiency with arms. Every man in the depot company must be proficient in the use of the weapons authorized by T/O&E 10-227.

- (2) Chemical attack. Protection against chemical warfare requires thorough training in the identification of toxic gases and in the use of the gas mask and the other protective equipment issued to the individual.
- 62. CAMOUFLAGE. a. General. Concealment of personnel and equipment from enemy observation through the effective use of camouflage is the principal defense of the depot company. Personnel and equipment should blend as much as possible with the surroundings.
- b. References. Information on the use of camouflage may be found in the following publications:
 - (1) FM 5-20, Camouflage, Basic Principles.
 - (2) FM 5-20A, Camouflage of Individuals and Infantry Weapons.
 - (3) FM 5-20B, Camouflage of Vehicles.
 - (4) FM 5-20C, Camouflage of Bivouacs, Command Posts, Supply Points, and Medical Installations.
 - (5) FM 5-20H, Camouflage Materials and Manufacturing Techniques.
 - (6) FM 72-20, Jungle Warfare.
- 63. **DEMOLITION**. All depot company personnel should be trained in the principles and practices of demolition, which will be carried out through command channels. Each man will destroy what he is responsible for, whether truck, typewriter, or general supplies.
 - o. Supplies will be saturated with gasoline.

- **b.** Thermite bombs or other inflammables will be employed to ignite and destroy supplies.
- c. Warehousing equipment will be destroyed by fire, explosives, and by destruction of motors.
- d. Vehicles may be demolished by using an ax or a sledge hammer and destroying vital parts such as distributors, and coils.
- e. Clerks will destroy all records which cannot be removed.

CHAPTER 8

MOVEMENT

Section I. MOVEMENT BY MOTOR

- 64. REQUIREMENTS. When personnel and equipment of the quartermaster clothing and general supplies depot company are to be moved by motor transport, the transportation section of the army or base depot to which the company is attached will coordinate movement arrangements. These arrangements normally will consist of furnishing and supervising necessary motor units, rendering assistance in preparation of the movement schedule and tables, and coordinating traffic control in conjunction with the traffic control agencies of its own and higher headquarters.
- 65. PLAN FOR MOVEMENT. a Capacity. The capacity of motor transportation for the movement depends upon the rated capacity of the transportation employed, the type of vehicle bodies, and the method of carrying personnel. Normal capacities for trucks carrying personnel with individual weapons, packs, and extra ammunition, with no additional cargo, are as shown below.
- b. Report to commander of new station. On departure from the home station, the company commander will report to the commander of the new

Truck	Men (excluding driver) ¹
¼-ton. ¾-ton. 1 ½-ton	. 8
2½-ton or larger²	

¹Loads listed are in addition to the driver and one man on the front seat. For distances greater than 75 miles, the above figures should be reduced.

station (by air mail, letter, radio, or teletype) the following detailed information:

- (1) Route, place, and date of long halts or bivouacs, with the duration of such halts indicated.
- (2) Number of serials, number of vehicles in each, and date and hour of departure and scheduled arrival of each serial at designated point.
- (3) Number, by grades, of officers and number, by grades, of enlisted men.
- (4) Number and types of pieces of wheeled equipment.

c. Assignment of jobs.

(1) Advance agent. To facilitate supply, the company commander should designate a platoon leader as the advance agent. The advance agent will be responsible for procuring initial supplies at the home station, establishing refilling points along the route of march, purchasing additional supplies as they are

²When 2½-ton dump trucks or 2½-ton short wheelbase artillery trucks carry the loads shown here, some personnel are required to stand.

required, and making billeting arrangements. The designated officer should report immediately to the station finance officer for instructions and make arrangements to be appointed agent officer. Upon arrival at the destination, the agent officer will render an accounting to the disbursing officer for the new station.

- (2) *Drivers*. Drivers will drive the vehicles to which they normally are assigned.
- (3) Clean-up party. A clean-up party should be designated to inspect bivouac areas and halt sites after they are vacated by the column.
- (4) Reconnaissance party. A reconnaissance party should be designated to select halting and bivouac areas in advance.
- (5) Maintenance personnel. The driver and the assistant driver of each vehicle are responsible for preventive maintenance within the limits of their ability and with the equipment available for their use. Vehicle technical manuals for each truck should be studied carefully.
- d. Rate of march. When tactical considerations do not interfere, the following may be used as a guide in planning an average day's motor march:
 - (1) Preparation for march (including time for breakfast, inspection of vehicles, and breaking of camp): 1 hour.
 - (2) Running time (including all halts except noon halt): 7 to 8 hours.
 - (3) Halt for lunch and refueling: 1 hour.

- (4) Inspection and servicing of vehicles after arrival at camp: 1 hour.
- (5) Average convoy speed should be about 25 miles per hour. The individual vehicle should not exceed 35 miles per hour.
- e. References. Specific instructions on motor transportation and convoys are contained in FM 25-10.

Section II. MOVEMENT BY RAIL

- 66. REQUIREMENTS. a. Transportation. When the total allowances of personnel and equipment are to be moved by rail, passenger and freight cars will be furnished as required. As soon as the company commander receives orders to move his company by rail, he will submit his requirements in letter form to the local transportation officer, who will arrange for transportation facilities. The letter will contain the following information:
 - (1) Orders or instructions authorizing the movement.
 - (2) Name and number of organization.
 - (3) Number of officers, enlisted men, and vehicles.
 - (4) Quantity of public property and authorized and checkable personal baggage.
 - (5) Date and place of entraining (if movement is in continental United States).
 - (6) Destination (if movement is in continental United States).
- b. References. For detailed instructions on rail movement of personnel and material, the following publications should be consulted: CTB 35 (10

July 1945), AR 55-130, AR 55-135, AR 55-145, AR 55-160, and FM 101-10.

- 67. PLAN FOR MOVEMENT. The company commander will be informed by the shipping transportation officer where the freight and passenger equipment will be placed and when the equipment will be in position for loading. It is the commander's responsibility to see that all plans are complete and that all necessary assignments of personnel are made for the movement of the unit.
- a. Entraining officer. The company commander will detail one of the platoon leaders for duty as entraining officer (AR 55-145). The duties of the entraining officer are as follows:
 - To make a reconnaissance of the approaches to the entraining point in order that entraining may proceed without confusion, delay, or interruption from traffic.
 - (2) To superintend the loading of both personnel and property.
 - (3) To take the necessary steps to prevent delay in the loading of freight and baggage and to make sure that the loading is done properly.
 - (4) To collect the checkers' lists and transmit them to the shipping transportation officer without delay.
 - (5) To proceed to the entraining point in advance of the command and supervise the assignment of men to the cars; to allow only one entrance to each car to

be used; and to instruct the men entering the car to go directly to their seats.

- b. Train transportation officer. The company commander will detail one of the platoon leaders for duty as train transportation officer. The duties of the train transportation officer are as follows:
 - (1) To make a record of the transportation requests as prescribed by AR 55-145.
 - (2) To arrange with the train conductor to have the transportation requests taken up by the latter on the train. If such an arrangement cannot be made, the transportation officer must obtain tickets by presenting the transportation requests to the station agent prior to departure.
 - (3) Accompanied by the train conductor, to count the passengers as soon after departure as is practicable.
 - (4) To prepare a bill of lading for organizational equipment in accordance with instructions in AR 55-145, to be turned over either to the agent of the last carrier or to the transportation officer at the destination.
 - (5) To designate one noncommissioned officer for each car checker, who will list the property loaded and record the data required for the preparation of the bill of lading.
- c. Baggage detail. It is the company commander's responsibility to see that a baggage detail

is formed from the enlisted personnel to load and unload the baggage.

- d. Guard detail. It is the company commander's responsibility to see that a guard detail is formed from the enlisted personnel. At least two men should ride in each unsealed freight car to guard the company equipment.
- e. Time of departure. The commander will make a report of the exact time of departure to the theater traffic control division by telegram immediately before departure. Upon arrival at the destination he also will report the exact time and date of arrival. In his report he will indicate the movement by routing number only.
- f. Mess officer. The company commander will appoint a mess officer, who will supervise the preparation and serving of meals.
- g. Orders. The company commander will issue orders to his company in conformity with AR 55-145, paragraph 14e.
- h. Delays. The company commander will maintain a complete record of delays en route and of any other occurrences which compel the use of railway equipment after the scheduled hour of arrival at the destination. Such a record will answer questions which may arise as to the improper use of railway facilities.
- i. Inspection. The company commander will make an inspection of railway equipment which has been vacated, with the object of determining whether any railway property has been damaged or unlawfully removed. He will report the result of this inspection in writing to the commanding officer of the new station.

- j. Certificates. The company commander will be responsible for the required railroad transportation and/or accommodation certificates.
- k. Detraining. If possible, train schedules should provide for arrival at the destination during daylight. Troops will be notified of the arrival hour in ample time to enable them to be prepared to detrain promptly. The officers and the guard detail will detrain first. The baggage detail will be left to unload and bring up the property. Where the camp is distant from the detraining point, arms may be stacked and the property unloaded by the entire company. The noncommissioned officers who acted as checkers when the property was loaded will, if practicable, be assigned to the same duty in unloading.
- I. Report required for separate freight shipments. When a freight shipment is made separately from a movement of personnel, the report to the commandant of the new station should contain the following information:
 - (1) Routing by rail.
 - (2) Car numbers (boxcar or flatcar) and general description of contents.
- 68. PACKAGING, BLOCKING, AND BRACING. a. General. It is the responsibility of the company commander to make certain that all railway shipments of depot supply equipment comply with the requirements and instructions given in the following publications:
 - (1) JAN-P-100, Joint Army-Navy Specifications for Packaging and Packing for Oversea Shipment (Army No. 100-14B).

- (2) Rules Governing the Loading of Commodities on Open Top Cars, published by the Association of American Railroads.
- (3) The Code of Rules for Loading Closed Cars, published by the Operating-Transportation Division of the Association of American Railroads.
- (4) AR 55-155, Transportation of Public Property (Except Animals) and Remains.
- b. Packaging. In general, the following factors should be considered in deciding which container to use in a given instance (see tables I and II):
 - (1) Suitability to articles to be packed.
 - (2) Availability.
 - (3) Tare weight.
 - (4) Cubic displacement.
 - (5) Ease in handling and storing.
 - (6) Cost.
- c. Blocking and bracing. Standard operating procedure for blocking and bracing of vehicles for rail shipment may be found in Rules Governing the Loading of Commodities on Open Top Cars (a above). Detailed drawings of blocking and bracing vehicles may be found in appendix II. The following instructions may be used as a general plan:
 - (1) One block outside of each wheel ordinarily is sufficient to prevent lateral movement, but security against longitudinal movement requires two chocks to each wheel, one in front and one in rear.

Table I. Guide to Choice of Interior Packing for Shipment of Depot Company Equipment and Supplies

				Туре	f handlir	Type of handling required	pa		
Article	Brac-	Belt-	Flots	Flotation	Car-		Surface		Corro
	ing	ing	Heavy-	Light- weight	tons and cars	Loose	protec- tion	Repack- ing	ston preven- tive
Structural parts, metal or	Þ	Þ							ļ ;
Major items, machines.	4 X X	4 M M	×		×	: :	×		4 X Þ
Loose articles not liable to damage during transpor-	 	{						4	4
tation	. ×	: >	: : >	A	·	: >	: : :	:	: : :
Wire and cable	ŧ ×	- • ×	₹ 	4 :	٠ :	4 :	∢ ⋈	∢ ⋈	< ⋈
Furniture, office and field	X	×			×	:		X	×
Office machinery	×	×	×		X			×	×
Kitchen and sanitary equipment.	X	×	×	:	×	:	×	×	×
						•			

Table II. Guide to Choice of Outer Container for Shipment of Depot Company Supplies and Equipment

Article	Nailed wood crate	Cleated plywood pox	Nailed wood box	Wire- bound box	Fiber box2	Bale	Bundle
Structural parts, metal or wood.	×			-			 ×
Major items, machines	X	×	×	×	×		; ;
Tools and machine parts	X	×	×	×	×		-
Loose articles not liable to damage							
during transportation	•	-				×	×
Hardware and fittings		×	×	×	×		
Wire and cable	:	×	X	×	×	:	
Furniture, office and field	×	×	X	×	×		•
Office machinery	×	X	X	X	X	:	
Kitchen and sanitary equipment	×	X	X	X	×		
IThis tobic does not name them them were to 100 to 100	4					 	

17 his table does not cover those items governed by I.C.C. regulations on transportation of explosives and other dangerous articles. ²Maximum weight of box and contents 70 pounds for solid fiber box.

- (2) As an additional precaution, whenever the material is available, an inside block should be used and a rope or strap of burlap or canvas should be passed over the felloe, one turn being made around each block.
- (3) Chocks must be at least 3 inches high and lumber user for blocking must not be less than 2 by 4 inches.
- (4) Five-inch spikes or fortypenny nails should be used to secure chocks and blocks to the floor of the car.
- (5) Heavy wire (No. 8 gage black annealed or its equivalent) should be used for securing loads.
- (6) Crates and packages must be shored and braced in accordance with usual practices.

Section III. MOVEMENT BY AIR

- 69. REQUIREMENTS. a. Orders. Orders for movement by air will be issued by higher authority to both the commander of the quartermaster clothing and general supplies depot commander and the air task force commander. The orders will comprise—
 - (1) Composition of unit.
 - (2) Destination.
 - (3) Mission of unit and general plan of operation.
 - (4) Designation of departure airport.
 - (5) Method of movement from present site and quartering arrangements at or near airport.

- (6) Date and hour air transport movement begins.
- (7) Probable length of time during which the unit must be self-sustaining as to supply.
- (8) Restrictions on amount or type of equipment and/or supplies to be taken.
- (9) Provisions for subsequent supplies.

b. Reports.

- (1) Company commander's report. When the orders for movement by air are received, the commander of the quartermaster clothing and general supplies depot company will prepare a report for the air task force commander. The report will contain the following information:
 - (a) Total weight and cubage of organizational equipment and supplies.
 - (b) Name, cubage, weight, and number of bulky items.
 - (c) Strength and composition of unit.
 - (d) Amount of baggage.
- (2) Task force commander's report. The air task force commander will prepare a movement plan, based upon the report from the depot company commander, which he will submit to higher authority (authority ordering movement) for approval (FM 101-10 and DA Pamphlet 29-15).

70. PLAN FOR MOVEMENT. a. Information.

- (1) Initial. The depot company commander will compile the following information based on orders received from higher authority:
 - (a) Methods of loading desired.
 - (b) Initial operations at destination such as unloading arrangements, procedure of ground transportation, and tactical dispersion.
- (2) Destination. If movement orders do not include specific items of supply and equipment which must be excluded from air shipment, the commanding officer of the depot company will determine—
 - (a) Tentage available at destination.
 - (b) Operating equipment available at destination.
 - (c) Vehicles at destination which may be utilized in place of allowed vehicles.
 - (d) Availability of operating supplies at the destination.
- b. Procedure. The operations listed below must be considered in detail by the company commander:
 - Movement of unit from present location to vicinity of departure airport.
 Marching and entraining tables will be necessary.
 - (2) Movement to loading points at departure airport.
 - (3) Loading of trucks to correspond to the loading of airplanes. (Loading of per-

- sonnel and equipment for one airplane on one truck or two trucks, depending on truck's capacity.)
- (4) Movement to loading points, including such factors as time, route, traffic control, loading arrangements, and guides if required.
- (5) Loading airplanes.
- (6) Movement to destination timetable.
- c. Personnel and baggage. Preparations for movement of men and baggage will be made on the basis of the type of plane to be used (cargo, personnel, or personnel-cargo). This will be determined in the plans of the depot company commander and the air task force commander. Personnel baggage will be carried either in the same plane with the men or in separate cargo planes.
- d. Packaging and packing. Procedures for packaging and packing for air transportation are similar to those discussed in paragraph 68. Lightness of crating materials is important. A method of packaging best suited to the type of cargo plane assigned to the movement should be determined.

APPENDIX I

TABULATED DATA

1. FORK LIFT TRUCK. a.	General.
Height	
Length	
Width	
Weight	
Cubage	
Area of car floor	.040 00510 1000
(occupied)	811 square feet
Type of brakes	
- -	. Hy arauno.
b. Engine.	Continental E 6900 07
	Continental F 6209-97.
Type	
Number of cylinders.	
Displacement	
Governed speed	
Brake horsepower	
Type of ignition	
Fuel	70-octane.
c. Tires.	
Number	
Type	
Size	6.50×16 inches.
d. Capacities.	
Fuel tank	.10 gallons.
Oil tank (hydraulic)	.7.25 gallons.
Crankcase	5 quarts.

Transmission7 pints.
Differential 6 pints.
Cooling system 19 quarts.
e. Performance.
Number of speeds:
Forward3.
Reverse1.
Maximum speed
(loaded)11.5 MPH.
Lift:
Height144 inches.
Speed per second:
Loaded 6.4 inches.
Light 6.6 inches.
Capacity (25 inches
from heel of fork) 3,500 pounds.
2. WAREHOUSE TRACTOR. a. General.
Height
Length
Width65.5 inches.
Weight:
Unboxed5,090 pounds.
Unboxed5,090 pounds. Boxed (shipping) 5,690 pounds.
Boxed (shipping) 5,690 pounds. Cubage
Boxed (shipping) 5,690 pounds.
Boxed (shipping) 5,690 pounds. Cubage
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Boxed (shipping) 5,690 pounds. Cubage
Boxed (shipping) 5,690 pounds. Cubage
Boxed (shipping) 5,690 pounds. Cubage

Number of cylinders.	. 6.
Displacement	230 cubic inches.
Governed speed	.1,800 RPM.
Brake horsepower	. 63.
Type of ignition	Battery.
Fuel	. 80-octane.
c. Tires.	
Number	. 6.
Type	Pneumatic, 6-ply.
Size:	
Front	.6.00 x 9 inches.
Rear	6.50 x 16 inches.
d. Capacities.	
Fuel tank	. 6 gallons.
Crankcase	
Transmission	
Differential	9.5 pints.
Cooling system	16 quarts.
e. Performance.	
Maximum speed	
(loaded)	.12 MPH.
Number of speeds:	
Forward	3.
Reverse	1.
Towing capacity	
(on level)	85 tons.
Drawbar pull	
(maximum)	4,000 pounds.
Gradeability	
(maximum)	20 percent.
WAREHOUSE TRAILER.	
Height	20 inches.
Length	

3.

Width	
Cubage	
Capacity4,000 pounds.	
Area of car floor	
(occupied)21 square fee	t.
4. HAND TRUCK.	
Length	
Width19.75 inches.	
Weight	
Capacity (approx.) 600 pounds.	
Wheel diameter 9 inches.	
5. CONVEYOR, GRAVITY ROLLER*	
Length	
Width	
Diameter of rollers 1.34 inches.	
Diameter of Toners 1.34 Inches.	
6. ELECTRIC LIGHTING EQUIPMENT.	
Name	Quantity
Bag, nail, canvas	3
Belt, safety	2
Chest:	
Type A, ES 23-1	1
Type B, ES 23-1	1
Circuit breaker:	
Two 1-pole, 20-ampere	10
Two 1-pole, 50-ampere	2
Cleat, 2-wire (pairs)	400
Climbers, lineman's (pairs)	2
Conduit, nonmetallic (feet)	25
Cord, lamp (feet)1	,000

^{*}Both straight and 45° angle sections.

Name	Quantity
Generator set, portable	1
Hammer, carpenter's	2
Holder, wire	50
Insulator, porcelain	200
Lamp:	
14-watt	30
25-watt	100
60-watt	50
Nail, wire (pounds)	15
Nailhead, leather (pounds)	2
Pliers, lineman's	6
Wire (reel)	1
BALING MACHINE.	
Height	
Length	
Width 14 inches.	
Cubage8.9 cubic feet.	
Capacity125 pounds.	
Area of car floor	
(occupied)2.1 square fee	et.

7.

APPENDIX II

BLOCKING AND BRACING FOR RAIL SHIPMENT

METHOD 1. Place eight blocks B, one to the front and one to the rear of each wheel (fig. 20). Nail the heel of each block to the car floor, using five 40-penny nails to each block. Toenail that portion of the block under the tread to the car floor with two 40-penny nails to each block. Place two blocks D against the outside face of each wheel. Nail the lower block to the car floor with three 40-penny nails and the top block to the lower block with three 40-penny nails. Pass four strands (two wrappings) of No. 8 gage block annealed wire C around each prong of the fork at the front of the fork lift truck and through a stake pocket on the railroad car (fig. 20). Tighten the wires enough to remove slack.

METHOD 2. Place four blocks G, one to the front and one to the rear of each set of wheels (fig. 21). These blocks are to be at least 8 inches wider than the over-all width of the vehicle at the car floor. Using sixteen blocks F, place two against blocks G to the rear of each wheel. Nail the lower cleat to the floor with three 40-penny nails and the top cleat to the cleat below with three 40-penny nails. Nail four cleats H on the

outside of each wheel to the top of each block G with two 40-penny nails. Pass four strands (two wrappings) of No. 8 gage block annealed wire G around each prong of the fork at the front of the fork lift truck and through a stake pocket on the railroad car (fig. 21). Tighten the wires enough to remove slack.

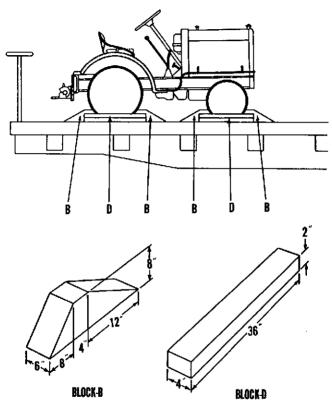


Figure 20. Method 1: Blocking and bracing for rail shipment.

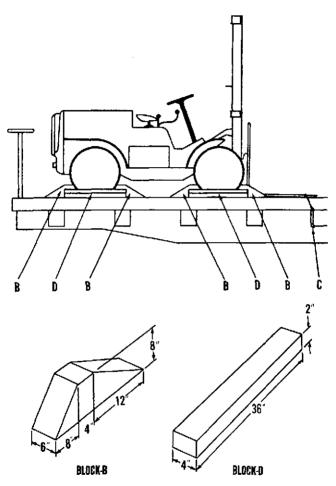


Fig. 20.—Continued.

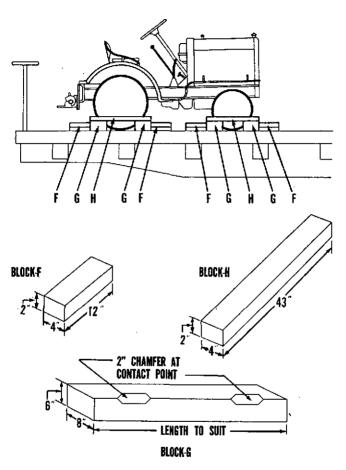


Figure 21. Method 2: Blocking and bracing for rail shipment.

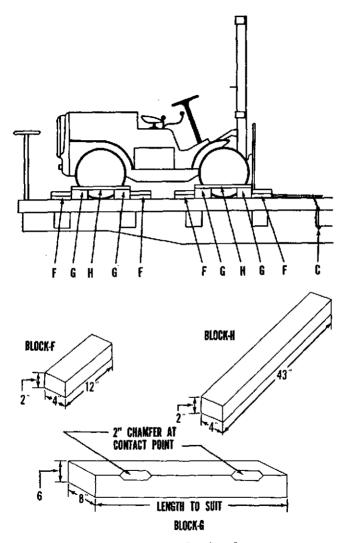


Figure 21.—Continued.

APPENDIX III

UNIT PROFICIENCY STANDARDS

The following is a checklist for training inspection of quartermaster clothing and general supplies depot company:

- 1. BASIC. a. Do the men have knowledge of first aid?
 - b. Are the men trained in map reading?
- c. Are the men trained in proper conduct if captured?
- **d**. Are the men trained in the use of the gas mask?
- e. Are the men oriented in the mission of the unit?
- f. Are the men trained in the proper use of their weapons?
- g. Has each man completed his basic military training?
- 2. TECHNICAL. Are the personnel able to perform their primary mission? (Determine by spot check of special tasks set up for each.)
 - a. Supply chief.
 - b. Carpenters.
 - c. Automotive mechanics.
 - d. Checkers.

- e. Supply clerks.
- f. Fork lift truck operators.
- q. Warehousemen.
- 3. **HOUSEKEEPING AND SUPPLY**. **a**. Is the unit supply section trained to function properly?
- **b.** Is the unit mess section trained to function properly? To eliminate waste?
- c. Is the unit administrative section trained to function properly?
- 4. PRACTICAL TEST OF COMPLETE UNIT. a. Set up problems involving conduct of the unit in the following operations:
 - (1) Selection of camp site and setting up of depot for operation.
 - (a) Does the site afford the best facilities for properly servicing the troops?
 - (b) Is proper distribution made of units?
 - (c) Are roads and road conditions used to advantage?
 - (d) Are reserve units available for emergency relief?
 - (2) Defense of bivouac.
 - (a) Is the plan of defense tactically sound?
 - (b) Are all personnel armed with their permanently assigned weapons?
 - (c) Does the plan for issue of arms and ammunition efficiently meet the requirements of speed, safety, and the proper safeguarding of weapons?

- -(d) Is the plan adequate for defense against ground troops? Paratroops?

 Air attacks?
- (3) Demolition of supplies and equipment.
 - (a) Is the demolition plan tactically sound?
 - (b) Is the plan technically sound?
 - (c) Are all personnel acquainted with the demolition plan and capable of performing their mission?
- (4) Showdown inspection of organizational and individual personal equipment.
 - (a) Is organizational equipment complete and serviceable?
 - (b) Is individual equipment complete and serviceable?
- **b.** With due consideration to the above problems, determine the following:
 - (1) Can the unit perform its primary mission?
 - (2) Can the unit service a designated number of troops?
 - (3) Can the platoon perform its primary mission when it is operating as a separate unit?
- c. Set up a problem involving the unit in offensive ground action as a combat rifle unit (covering tactical training of infantry soldier). Can the unit perform this mission in a (satisfactory) (very satisfactory) (excellent) manner?

- d. Check operation and maintenance of the organizational equipment of the unit.
 - (1) Are the vehicles properly operated?
 - (2) Is the equipment properly maintained?
 - (3) Is preventive maintenance practiced?
 - (4) Are technical maintenance and operations instructions provided for each vehicle?

APPENDIX IV

FIELD EXPEDIENTS

- 1. A tire-changing rack for trucks operating in the depot area can be made by joining two pieces of timber in the form of an X. Large projecting bolts may be used to hold the rim in place.
- 2. When tentage is not available, bows and canvas coverings removed from trucks will provide adequate shelter from cold weather for men engaged in supply work.
- 3. In tropical areas where tentage is scarce, palm fronds or grass can be thatched or strung on poles and wires and suspended over or placed directly on piles of supplies for protection.
- 4. To help rotate stocks properly a chart or record system is of invaluable aid. One method is using a locator system. The date the supplies are received is recorded on the locator file. This sets up an easy system to insure rotation of supplies. The locator file is placed in the issue checker's office, where it provides a ready reference.
- 5. Supplies which are uneven in character and do not stack well, such as clothing, can be handled

well by using box pallets. These box pallets are made by building a frame around the pallets.

- 6. Whenever possible a packaging section should be established in the depot area where carpenters and other personnel can make boxes and cartons to replace coverings that have been damaged in transit. Salvaged burlap can be used for rebaling purposes.
- 7. Replacement of wooden floors in closed-storage facilities with concrete will aid the efficiency of materials-handling equipment operations.
- 8. Non-English-speaking civilian laborers can be instructed to recognize different categories of supplies by the different colors and symbols found on the containers.
- 9. Effective camouflage can be obtained in tropical areas by allowing trees in the depot area to project through the roofs of supply shelters. Natural vegetation can be further used to obscure the roofs.
- 10. Knockdown folding chairs and tables for use in the depot office and storage area can be made from salvaged crating lumber.
- 11. A box opener for opening paper boxes for inspection without destroying the carton can be made by taking a salvaged vehicle spring and fashioning an oversized letter opener. With the opener, flaps can be opened without destroying

cartons. After contents of the boxes have been inspected, flaps can be glued back in place.

12. By loading one freight car through another (see diagram below) a double line of cars can be put on the tracks near a warehouse. Crews go through cars 2 and 4 to load 6 and 8 first; then they load 5 and 7; next 2 and 4; and, finally, 1 and 3.

ar ab LOADING ONE FREIGHT CAR THROUGH ANOTHER 那里 CREW A RE 里里 PLATFORM

Figure 22. Loading one freight car through another.

APPENDIX V

REFERENCES

1. ADMINISTRATION.

TM 12-250 TM 12-255 Administration.

Administrative Procedures.

INDEXES.

FM 21-8

Military Training Aids,

C 1–7.

SR 110-1-1

Index of Army Motion Pictures and Film Strips.

SR 310-20-3

Index of Field Manuals,
Training Circulars, Firing Tables and Charts,
Graphic Training Aids,
Army Training Programs, JANAP's Combined Communications
Board publications, Tables of Organization and
Equipment, Tables of Al-

SR 310-20-4

Index of Technical Manuals, Technical Bulletins, Supply Bulletins, Lubrication Orders, and Modification Work Orders.

Basic Allowances.

lowances, and Tables of

SR 310-20-5	Index of Administrative
	Publications.
SR 310-20-6	Index of Blank Forms and Army Personnel Classi-
	fication Tests.

3. MESS MANAGEMENT.

TM 10-205	Mess Management and
	Training.
TM 10-400	Stoves, Ranges, Ovens, and
	Cooking Outfits.
TM 10-405	The Army Cook.
TM 10-407	Cutting of Beef.
TM 10-408	Cutting and Preparing
	Lamb.
TM 10-409	Central Meat-Cutting
	Plants.
TM 10-412	Army Recipes.

4.

	r lalius.
TM 10-412	Army Recipes.
MILITARY TRAI	NING.
FM 5-15	Field Fortifications.
FM 5-20	Camouflage, Basic Principles.
FM 5-20A	Camouflage of Individual and Infantry Weapons.
FM 5-20B	Camouflage of Vehicles.
FM 5-20C	Camouflage of Bivouacs, Command Posts, Supply Points, and Medical In- stallations.
FM 5-20G	Camouflage of Rear Areas and Fixed Fortifications.

FM 5-20H	Camouflage Materials and Manufacturing Techniques.
FM 5-31	Land Mines and Booby Traps.
FM 20-15	Tents and Tent Pitching.
FM 21 series	
FM 22-5	Leadership, Courtesy, and Drill.
FM 23-7	U. S. Carbine, Caliber .30, M1 and M1A1.
FM 23-30	Hand and Rifle Grenades, Rocket, AT, HE, 2.36- Inch.
FM 23-35	Pistols and Revolvers.
FM 26-5	Interior Guard Duty.
MOTOR ODERATIO	NI AND MAINTENANCE

5. MOTOR OPERATION AND MAINTENANCE.

FM 25-10	Motor Transport.
TM 21-300	Driver Selection, Training,
	and Supervision,
	Wheeled Vehicles.
TM 21-305	Driver's Manual.
TM 37-2810	Motor Vehicle Inspection
	and Preventive Mainte-
	nance Services.

6. SPECIAL OPERATIONS.

	110110,
FM 31-25	Desert Operations.
FM 70-10	Mountain Operations.
FM 70-15	Operations in Snow and
	Extreme Cold.
FM 72-20	Jungle Warfare.

7. SUPPLY OPERATIONS AND MAINTENANCE.

FM 10-5	Quartermaster Operations.
FM 10-6	Quartermaster Service Company.
FM 10-10	Quartermaster Service in Theater of Operations.
FM 10-35	Transportation Corps Truck Companies.
FM 10-38	Quartermaster Base Depot Supply and Sales Com- pany.
TM 3-220	Decontamination.
TM 10-250	Storage of Quartermaster Supplies.
TM 10-266	Quartermaster Handbook, Salvage Collecting Com- pany.
TM 10-352	Quartermaster Handbook, Laundry Company.
TM 10-367	Quartermaster Base Depot Company.
TM 10–1619	Quartermaster Materials Handling Equipment.

8. TRAINING DOCTRINE AND PROGRAMS.

FM 21-5	Military Training.
TM 21-250	Army Instruction.
MTP 10-1	Mobilization Training Program for Quartermaster Enlisted Personnel of the Army Service Forces.

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